Pediatric Ophthalmology and Strabismus

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Basic and Clinical Science Course

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# Contents

General Introduction ................................................. xix

**Objectives** ....................................................... 1

**PART 1  Strabismus** .................................................. 3

**1 The Pediatric Eye Examination** ................................. 5

Preparation ................................................................... 5
Examination: General Considerations and Strategies. ............. 6
Examination: Specific Elements. ..................................... 7
  Visual Acuity Assessment .............................................
  Alternative Methods of Visual Acuity Assessment
  in Preverbal Children ..............................................
  Red Reflex Examination (Brückner Test) .........................
  Dynamic Retinoscopy ............................................... 11
  Visual Field Testing .................................................
  Pupil Testing ....................................................... 11
  Anterior Segment Examination ....................................
  Intraocular Pressure Measurement ................................
  Cycloplegic Refraction ............................................
  Fundus Examination ............................................... 13
Examination of the Uncooperative Child. .......................... 14

**2 Strabismus Terminology** .......................................... 15

Prefixes and Suffixes .................................................. 15
  Prefixes .................................................................... 15
  Suffixes ............................................................... 16
Strabismus Classification Terms ..................................... 16
  Age of Onset ....................................................... 16
  Fixation .................................................................... 16
  Variation of the Deviation Size With Gaze Position
  or Fixating Eye ..................................................... 16
  Miscellaneous Terms ............................................... 17
  Abbreviations for Types of Strabismus .......................... 17

**3 Anatomy of the Extraocular Muscles** ............................. 19

Origin, Course, Insertion, Innervation, and Action of the
  Extraocular Muscles ................................................ 19
  Horizontal Rectus Muscles ........................................ 20
  Vertical Rectus Muscles ............................................ 20
  Oblique Muscles ................................................... 20
Contents

Sensory Physiology and Pathology

Epidemiology
Detection and Screening
Pathophysiology
Classification
Strabismic Amblyopia
Refractive Amblyopia
Visual Deprivation Amblyopia
Evaluation
Treatment
Cataract Removal
Refractive Correction
Occlusion and Penalization
Complications of Therapy

Amblyopia

Blood Supply of the Extraocular Muscles
Arterial System
Venous System
Structure of the Extraocular Muscles
Orbital and Fascial Relationships
Adipose Tissue
Muscle Cone
Muscle Capsule
The Tenon Capsule
Pulley System
Anatomical Considerations During Surgery

Motor Physiology

Basic Principles and Terms
Axes of Fick and Ocular Rotations
Positions of Gaze
Extraocular Muscle Action
Eye Movements
Motor Units
Monocular Eye Movements
Binocular Eye Movements
Supranuclear Control Systems for Eye Movement

Sensory Physiology and Pathology

Physiology of Normal Binocular Vision
Retinal Correspondence
Fusion
Selected Aspects of the Neurophysiology of Vision
Visual Development
Effects of Abnormal Visual Experience on the
Retinogeniculocortical Pathway

Levator Palpebrae Superioris Muscle
Relation of the Rectus Muscle Insertions
Blood Supply of the Extraocular Muscles
Arterial System
Venous System
Structure of the Extraocular Muscles
Orbital and Fascial Relationships
Adipose Tissue
Muscle Cone
Muscle Capsule
The Tenon Capsule
Pulley System
Anatomical Considerations During Surgery

Amblyopia

Epidemiology
Detection and Screening
Pathophysiology
Classification
Strabismic Amblyopia
Refractive Amblyopia
Visual Deprivation Amblyopia
Evaluation
Treatment
Cataract Removal
Refractive Correction
Occlusion and Penalization
Complications of Therapy

Motor Physiology

Basic Principles and Terms
Axes of Fick and Ocular Rotations
Positions of Gaze
Extraocular Muscle Action
Eye Movements
Motor Units
Monocular Eye Movements
Binocular Eye Movements
Supranuclear Control Systems for Eye Movement

Sensory Physiology and Pathology

Physiology of Normal Binocular Vision
Retinal Correspondence
Fusion
Selected Aspects of the Neurophysiology of Vision
Visual Development
Effects of Abnormal Visual Experience on the
Retinogeniculocortical Pathway

Levator Palpebrae Superioris Muscle
Relation of the Rectus Muscle Insertions
Blood Supply of the Extraocular Muscles
Arterial System
Venous System
Structure of the Extraocular Muscles
Orbital and Fascial Relationships
Adipose Tissue
Muscle Cone
Muscle Capsule
The Tenon Capsule
Pulley System
Anatomical Considerations During Surgery

Amblyopia

Epidemiology
Detection and Screening
Pathophysiology
Classification
Strabismic Amblyopia
Refractive Amblyopia
Visual Deprivation Amblyopia
Evaluation
Treatment
Cataract Removal
Refractive Correction
Occlusion and Penalization
Complications of Therapy

Motor Physiology

Basic Principles and Terms
Axes of Fick and Ocular Rotations
Positions of Gaze
Extraocular Muscle Action
Eye Movements
Motor Units
Monocular Eye Movements
Binocular Eye Movements
Supranuclear Control Systems for Eye Movement

Sensory Physiology and Pathology

Physiology of Normal Binocular Vision
Retinal Correspondence
Fusion
Selected Aspects of the Neurophysiology of Vision
Visual Development
Effects of Abnormal Visual Experience on the
Retinogeniculocortical Pathway
Abnormalities of Binocular Vision .................................................. 59
Visual Confusion ................................................................. 59
Diplopia ................................................................. 59

Sensory Adaptations in Strabismus .................................................. 60
Suppression ................................................................. 60
Anomalous Retinal Correspondence ......................................... 62
Monofixation Syndrome .......................................................... 63

7 Diagnostic Evaluation of Strabismus and Torticollis .................................................. 65
History and Presenting Features of Strabismus ........................................ 65
Assessment of Ocular Alignment .................................................. 65
Positions of Gaze ................................................................. 65
Cover Tests ................................................................. 66
Corneal Light Reflex Tests ......................................................... 69
Subjective Tests ................................................................. 70
Assessment of Eye Movements .................................................. 72
Ocular Rotations ................................................................. 72
Convergence ................................................................. 73
Fusional Vergence ................................................................. 73
Special Tests ................................................................. 74
Motor Tests ................................................................. 74
Assessment of the Field of Single Binocular Vision ................. 75
3-Step Test ................................................................. 75
Prism Adaptation Test ............................................................. 77
Torticollis: Differential Diagnosis and Evaluation ................. 77
Ocular Torticollis ................................................................. 78
Tests of Sensory Adaptation and Binocular Cooperation ........... 79
Red-Glass Test ................................................................. 80
Bagolini Lenses ................................................................. 80
4Δ Base-Out Prism Test .......................................................... 81
Afterimage Test ................................................................. 83
Amblyoscope Testing ............................................................. 84
Worth 4-Dot Test ................................................................. 84
Stereoacuity Testing ................................................................. 86
Related Videos ................................................................. 86

8 Esodeviations ................................................................. 87
Epidemiology ................................................................. 87
Pseudoesotropia ................................................................. 87
Infantile (Congenital) Esotropia ........................................ 88
Pathogenesis ................................................................. 89
Evaluation ................................................................. 89
Management ................................................................. 90
Accommodative Esotropia .................................................. 91
Pathogenesis and Types of Accommodative Esotropia .......... 91
Evaluation ................................................................. 92
Management ................................................................. 92
Acquired Nonaccommodative Esotropias .......................... 94
  Basic Acquired Nonaccommodative Esotropia ................. 94
  Cyclic Esotropia ........................................... 95
  Sensory Esotropia ........................................... 95
  Divergence Insufficiency .................................... 95
  Spasm of the Near Reflex ................................. 96
  Consecutive Esotropia ..................................... 96
Nystagmus and Esotropia ........................................ 97
Incomitant Esotropia ........................................... 97
  Sixth Nerve Palsy .......................................... 97
Other Forms of Incomitant Esotropia .......................... 98

9 Exodeviations .................................................. 99
  Pseudoexotropia ............................................. 99
  Exophoria ................................................... 99
  Intermittent Exotropia ..................................... 99
    Clinical Characteristics ................................. 100
    Evaluation ............................................... 100
    Classification .......................................... 101
    Treatment ............................................... 101
  Convergence Weakness Exotropia .......................... 104
  Constant Exotropia ....................................... 104
    Infantile Exotropia .................................... 105
    Sensory Exotropia ....................................... 105
    Consecutive Exotropia .................................. 106
  Other Forms of Exotropia ................................ 106
    Exotropic Duane Retraction Syndrome .................. 106
    Neuromuscular Abnormalities ............................ 106
    Dissociated Horizontal Deviation ....................... 106
    Convergence Paralysis ................................ 106

10 Pattern Strabismus ........................................... 109
  Etiology .................................................... 109
  Clinical Features and Identification ........................ 112
    V Pattern ................................................ 112
    A Pattern .............................................. 112
    Y Pattern .............................................. 112
    X Pattern .............................................. 113
    λ Pattern .............................................. 113
  Management ............................................... 113
    General Principles .................................... 113
    Treatment of Specific Patterns ......................... 114

11 Vertical Deviations ........................................... 117
  A Clinical Approach to Vertical Deviations .................. 117
  Incomitant Vertical Tropias ................................ 118
    Overelevation and Overdepression in Adduction .......... 118
    Superior Oblique Muscle Palsy .......................... 122
12 Special Forms of Strabismus ........................................... 133
   Congenital Cranial Dysinnervation Disorders ................. 133
      Duane Retraction Syndrome ............................ 133
      Congenital Fibrosis of the Extraocular Muscles ...... 136
      Möbius Syndrome ..................................... 137
   Miscellaneous Special Forms of Strabismus ................. 138
      Brown Syndrome ..................................... 138
      Third Nerve Palsy .................................... 140
      Sixth Nerve Palsy .................................... 142
      Thyroid Eye Disease .................................. 142
      Chronic Progressive External Ophthalmoplegia ......... 144
      Myasthenia Gravis ................................... 144
      Esotropia and Hypotropia Associated With High Myopia .. 145
      Internuclear Ophthalmoplegia ......................... 146
      Ocular Motor Apraxia .................................. 147
      Superior Oblique Myokymia ............................ 147
      Strabismus Associated With Other Ocular Surgery ....... 148

13 Childhood Nystagmus .............................................. 149
   General Features ............................................ 149
   Nomenclature .............................................. 149
   Evaluation .................................................. 150
      History .................................................. 150
      Ocular Examination ................................... 151
   Types of Childhood Nystagmus ............................... 152
      Congenital Nystagmus .................................. 152
      Acquired Nystagmus .................................... 155
      Nystagmus-Like Disorders ............................... 156
      Convergence-Retraction Nystagmus ...................... 156
      Opsoclonus ............................................ 156
   Treatment .................................................. 157
      Prisms .................................................. 157
      Surgery for Nystagmus .................................. 157

14 Surgery of the Extraocular Muscles ............................ 161
   Evaluation .................................................. 161
   Indications for Surgery .................................... 161
Planning Considerations .............................................. 162
Visual Acuity ...................................................... 162
General Considerations ........................................... 162
Incomitance ......................................................... 163
Cyclovertical Strabismus ........................................... 164
Prior Surgery ........................................................ 164
Surgical Techniques for the Extraocular Muscles and Tendons 164
  Approaches to the Extraocular Muscles .............................................. 164
  Rectus Muscle Weakening Procedures ........................................ 165
  Rectus Muscle Strengthening Procedures ....................................... 165
  Rectus Muscle Surgery for Hypotropia and Hypertropia .................. 165
  Adjustable Sutures .................................................. 166
Oblique Muscle Weakening Procedures ..................................... 167
Oblique Muscle Tightening (Strengthening) Procedures ....................... 168
  Stay Sutures ......................................................... 168
  Transposition Procedures ........................................... 168
  Posterior Fixation .................................................. 169
Complications of Strabismus Surgery ....................................... 169
  Diplopia ............................................................. 169
  Unsatisfactory Alignment ........................................... 170
  Iatrogenic Brown Syndrome .......................................... 170
  Anti-Elevation Syndrome ........................................... 170
  Lost and Slipped Muscles ........................................... 170
  Pulled-in-Two Syndrome ........................................... 171
  Perforation of the Sclera ............................................ 171
  Postoperative Infections ........................................... 171
  Foreign-Body Granuloma and Allergic Reaction ............................... 172
  Epithelial Cyst .................................................... 172
  Conjunctival Scarring ................................................ 173
  Adherence Syndrome ................................................ 173
  Dellen ............................................................... 173
  Anterior Segment Ischemia ........................................... 174
  Change in Eyelid Position ........................................... 174
  Refractive Changes ................................................ 175
Anesthesia for Extraocular Muscle Surgery .................................... 175
  Methods ............................................................. 175
  Postoperative Nausea and Vomiting ........................................ 176
  Oculocardiac Reflex ................................................ 176
  Malignant Hyperthermia ............................................. 176
Chemodenervation Using Botulinum Toxin .................................... 176
  Pharmacology and Mechanism of Action .................................... 176
  Indications, Techniques, and Results ...................................... 177
  Complications ...................................................... 177
Related Videos ........................................................ 178
## Contents

### PART II  Pediatric Ophthalmology  

179

15  **Growth and Development of the Eye**  

181

- Normal Growth and Development  
  - Dimensions of the Eye  
  - Refractive State  
  - Orbit and Ocular Adnexa  
  - Cornea, Iris, Pupil, and Anterior Chamber  
  - Intraocular Pressure  
  - Extraocular Muscles  
  - Retina  
  - Visual Acuity and Stereoscopic Vision  
- Abnormal Growth and Development  

16  **Decreased Vision in Infants and Children**  

189

- Normal Visual Development  
- Evaluation of the Infant With Decreased Vision  
- Classification of Visual Impairment in Infants and Children  
  - Delayed Visual Maturation  
  - Pregeniculate Visual Impairment  
  - Retrogeniculate Visual Impairment, or Cerebral  
  - Visual Impairment  
- Pediatric Low Vision Rehabilitation  

17  **Eyelid Disorders**  

195

- Congenital Eyelid Disorders  
  - Telecanthus  
  - Dystopia Canthorum  
  - Cryptophthalmos  
  - Ablepharon  
  - Congenital Coloboma of the Eyelid  
  - Ankyloblepharon  
  - Congenital Entropion  
  - Congenital Ectropion  
  - Epiblepharon  
  - Congenital Tarsal Kink  
  - Distichiasis  
  - Euryblepharon  
  - Epicanthus  
  - Palpebral Fissure Slants  
  - Blepharophimosis–Ptosis–Epicanthus Inversus Syndrome  
  - Congenital Ptosis  
  - Marcus Gunn Jaw-Winking Syndrome  
- Infectious and Inflammatory Eyelid Disorders  
- Neoplasms and Other Noninfectious Eyelid Lesions  
  - Capillary Malformations  
  - Congenital Nevocellular Nevi of the Skin
Other Acquired Eyelid Conditions ........................................ 203
  Trichotillomania .................................................. 203
  Excessive Blinking ............................................... 203

18 Orbital Disorders .................................................. 205
Abnormal Interocular Distance: Terminology and Associations .... 205
Congenital and Developmental Disorders:
  Craniofacial Malformations ................................... 205
  Craniosynostosis ................................................ 205
  Nonsynostotic Craniofacial Conditions ..................... 213
Infectious and Inflammatory Conditions .......................... 216
  Preseptal Cellulitis ............................................ 216
  Orbital Cellulitis ................................................ 216
  Childhood Orbital Inflammation ............................... 218
Neoplasms ............................................................ 220
  Differential Diagnosis ........................................... 220
  Primary Malignant Neoplasms .................................. 221
  Metastatic Tumors ................................................ 222
  Hematopoietic, Lymphoproliferative, and Histiocytic Neoplasms 222
  Benign Tumors .................................................... 223
Ectopic Tissue Masses ................................................. 227
  Cystic Lesions ..................................................... 227
  Teratoma .......................................................... 230
  Ectopic Lacrimal Gland ........................................... 230

19 Lacrimal Drainage System Abnormalities ....................... 231
Congenital and Developmental Anomalies ....................... 231
  Atresia of the Lacrimal Puncta or Canaliculi ............ 231
  Congenital Lacrimal Fistula ................................... 232
  Dacryocystocele .................................................. 232
Nasolacrimal Duct Obstruction ..................................... 234
  Clinical Features .................................................. 234
  Nonsurgical Management ....................................... 235
  Surgical Management ........................................... 236

20 Diseases of the Cornea, Anterior Segment, and Iris .......... 241
Congenital and Developmental Anomalies of the Cornea .......... 241
  Abnormalities of Corneal Size and Shape ................... 241
  Abnormalities of Peripheral Corneal Transparency .... 242
  Abnormalities of Central and Diffuse Corneal Transparency 244
  Treatment of Corneal Opacities ............................. 248
Congenital and Developmental Anomalies of the Globe ....... 249
  Microphthalmos .................................................... 249
  Anophthalmos .................................................... 249
  Nanophthalmos ................................................... 249
21 External Diseases of the Eye

Infectious Conjunctivitis ........................................... 263
Ophthalmia Neonatorum ............................................. 264
Bacterial Conjunctivitis .............................................. 265
Viral Conjunctivitis .................................................... 267

Inflammatory Disease ................................................ 270
Blepharitis ............................................................... 270
Ocular Allergy ......................................................... 270
Ligneous Conjunctivitis ............................................... 273

Miscellaneous Conjunctival Disorders ............................ 273
Papillomas ............................................................... 273
Conjunctival Epithelial Inclusion Cysts. ......................... 273
Conjunctival Nevi ....................................................... 273
Ocular Melanocytosis ............................. 274
Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis 274

22 Pediatric Glaucomas ................................................. 277
Genetics ................................................................. 277
Classification .......................................................... 277
Primary Childhood Glaucoma .................................... 278
Primary Congenital Glaucoma ................................... 278
Juvenile Open-Angle Glaucoma .................................. 282
Secondary Childhood Glaucoma ................................ 283
Glaucoma Associated With Nonacquired Ocular Anomalies 283
Glaucoma Associated With Nonacquired Systemic Disease 283
or Syndrome ............................................................ 283
Secondary Glaucoma Associated With an Acquired Condition 283
Glaucoma Following Cataract Surgery ......................... 284
Treatment ............................................................... 284
Surgical Therapy ....................................................... 285
Medical Therapy ....................................................... 287
Prognosis and Follow-Up ............................................ 289
## 23 Childhood Cataracts and Other Pediatric Lens Disorders

Pediatric Cataracts ............................................. 291
General Features ........................................... 291
Morphology .................................................. 292
Evaluation ................................................... 297
Examination ................................................... 297
Cataract Surgery in Pediatric Patients ......................... 299
Timing of the Procedure .................................... 299
Intraocular Lens Use in Children ............................ 299
Management of the Anterior Capsule ......................... 300
Lensectomy Without Intraocular Lens Implantation .......... 301
Lensectomy With Intraocular Lens Implantation ............ 301
Postoperative Care .......................................... 302
Complications .............................................. 303
Visual Outcome After Cataract Extraction .................... 303
Structural or Positional Lens Abnormalities ................. 304
Congenital Aphakia .......................................... 304
Spherophakia ................................................. 304
Coloboma .................................................... 304
Dislocated Lenses in Children ................................ 305
Isolated Ectopia Lentis ...................................... 305
Ectopia Lentis et Pupillae. ................................... 305
Marfan Syndrome ......................................... 306
Homocystinuria ............................................ 306
Weill-Marchesani Syndrome ................................ 307
Sulfite Oxidase Deficiency ................................ 308
Treatment ...................................................... 308

## 24 Uveitis in the Pediatric Age Group

Epidemiology and Genetics .................................. 309
Classification ............................................... 309
Anterior Uveitis ............................................. 310
Juvenile Idiopathic Arthritis ................................ 310
Tubulointerstitial Nephritis and Uveitis Syndrome ....... 313
Kawasaki Disease ........................................... 313
Other Causes of Anterior Uveitis ............................ 313
Intermediate Uveitis ......................................... 314
Posterior Uveitis ............................................ 314
Toxoplasmosis ............................................... 314
Toxocariasis ................................................... 314
Panuveitis .................................................... 315
Sarcoidosis .................................................... 315
Familial Juvenile Systemic Granulomatosis ................. 316
Vogt-Koyanagi-Harada Syndrome .......................... 316
Other Causes of Posterior Uveitis and Panuveitis ........ 316
Masquerade Syndromes ........................................ 317
Evaluation of Pediatric Uveitis .............................. 317
Treatment of Pediatric Uveitis .............................. 318
  Management of Inflammation .......................... 318
  Surgical Treatment of Uveitis Complications .... 320

25 Disorders of the Retina and Vitreous ................ 321
  Congenital and Developmental Abnormalities ........ 321
  Persistent Fetal Vasculature ......................... 321
  Retinopathy of Prematurity ......................... 321
  Hereditary Retinal Disease ........................... 330
  Hereditary Macular Dystrophies .................... 333
  Hereditary Vitreoretinopathies ..................... 335
  Infections .............................................. 337
    Herpes Simplex Virus and Cytomegalovirus .... 337
    Human Immunodeficiency Virus ................... 338
  Tumors ................................................ 338
    Choroidal and Retinal Pigment Epithelial Lesions 338
    Retinoblastoma .................................... 339
  Acquired Disorders ................................. 347
    Coats Disease ...................................... 347
  Systemic Diseases and Disorders With Retinal Manifestations 348
    Diabetes Mellitus ................................ 348
    Albinism ............................................ 349

26 Optic Disc Abnormalities .............................. 353
  Developmental Anomalies .............................. 353
    Optic Nerve Hypoplasia .......................... 353
    Morning Glory Disc Anomaly .................... 355
    Coloboma of the Optic Nerve .................... 356
    Myelinated Retinal Nerve Fibers ................. 356
    Tilted Disc Syndrome ............................ 357
    Bergmeister Papilla ............................... 358
    Megalopapilla ..................................... 358
    Peripapillary Staphyloma ......................... 358
    Optic Nerve Aplasia .............................. 358
    Melanocytoma ...................................... 359
  Optic Atrophy ........................................ 359
    Dominant Optic Atrophy, Kjer Type .......... 359
    Recessive Optic Atrophy ......................... 360
    Behr Optic Atrophy ................................ 360
    Leber Hereditary Optic Neuropathy ............ 360
  Optic Neuritis ....................................... 361
  Papilledema .......................................... 362
  Idiopathic Intracranial Hypertension .......... 363
  Pseudopapilledema .................................. 363
  Drusen ................................................ 364
27 Ocular Trauma in Childhood ................................................................. 367
  Accidental Trauma ................................................................. 367
    Superficial Injury .......................................................... 368
    Penetrating Injury ......................................................... 368
    Blunt Injury .................................................................. 369
    Orbital Fractures .......................................................... 371
    Traumatic Optic Neuropathy ............................................. 372
  Nonaccidental Trauma .......................................................... 373
    Abusive Head Trauma ..................................................... 373
    Ocular Injury Secondary to Nonaccidental Trauma .......... 376
28 Ocular Manifestations of Systemic Disease ........................................... 377
  Diseases due to Chromosomal Abnormalities ......................... 377
    Inborn Errors of Metabolism .......................................... 377
  Familial Oculorenal Syndromes .......................................... 383
  Phakomatoses .................................................................. 383
  Neurofibromatosis ............................................................ 384
  Tuberous Sclerosis .............................................................. 388
  Von Hippel–Lindau Disease .................................................. 390
  Sturge-Weber Syndrome .................................................... 392
  Ataxia-Telangiectasia .......................................................... 394
  Incontinentia Pigmenti .......................................................... 395
  Wyburn-Mason Syndrome .................................................... 396
  Klippel-Trénaunay-Weber Syndrome .................................... 397
  Intrauterine or Perinatal Infection .......................................... 398
    Toxoplasmosis ................................................................ 398
    Rubella ........................................................................ 399
    Cytomegalovirus ............................................................. 400
    Herpes Simplex Virus ..................................................... 401
    Syphilis ....................................................................... 401
    Lymphocytic Choriomeningitis ......................................... 402
  Malignant Disease ................................................................. 402
    Leukemia .................................................................... 402
    Neuroblastoma ............................................................... 403
  Basic Texts ........................................................................ 405
  Related Academy Materials .................................................. 407
  Requesting Continuing Medical Education Credit .................. 409
  Study Questions .................................................................. 411
  Answer Sheet for Section 6 Study Questions ......................... 421
  Answers ........................................................................... 423
  Index ................................................................................. 429
General Introduction

The Basic and Clinical Science Course (BCSC) is designed to meet the needs of residents and practitioners for a comprehensive yet concise curriculum of the field of ophthalmology. The BCSC has developed from its original brief outline format, which relied heavily on outside readings, to a more convenient and educationally useful self-contained text. The Academy updates and revises the course annually, with the goals of integrating the basic science and clinical practice of ophthalmology and of keeping ophthalmologists current with new developments in the various subspecialties.

The BCSC incorporates the effort and expertise of more than 90 ophthalmologists, organized into 13 Section faculties, working with Academy editorial staff. In addition, the course continues to benefit from many lasting contributions made by the faculties of previous editions. Members of the Academy Practicing Ophthalmologists Advisory Committee for Education, Committee on Aging, and Vision Rehabilitation Committee review every volume before major revisions. Members of the European Board of Ophthalmology, organized into Section faculties, also review each volume before major revisions, focusing primarily on differences between American and European ophthalmology practice.

Organization of the Course
The Basic and Clinical Science Course comprises 13 volumes, incorporating fundamental ophthalmic knowledge, subspecialty areas, and special topics:

1. Update on General Medicine
2. Fundamentals and Principles of Ophthalmology
3. Clinical Optics
4. Ophthalmic Pathology and Intraocular Tumors
5. Neuro-Ophthalmology
6. Pediatric Ophthalmology and Strabismus
7. Orbit, Eyelids, and Lacrimal System
8. External Disease and Cornea
9. Intraocular Inflammation and Uveitis
10. Glaucoma
11. Lens and Cataract
12. Retina and Vitreous
13. Refractive Surgery

In addition, a comprehensive Master Index allows the reader to easily locate subjects throughout the entire series.

References
Readers who wish to explore specific topics in greater detail may consult the references cited within each chapter and listed in the Basic Texts section at the back of the book.
These references are intended to be selective rather than exhaustive, chosen by the BCSC faculty as being important, current, and readily available to residents and practitioners.

**Videos**

This edition of Section 6, *Pediatric Ophthalmology and Strabismus*, includes videos related to topics covered in the book (see the Related Videos section in Chapters 7, 11, and 14). The videos were selected by members of the BCSC faculty and are available to readers of the print and electronic versions of Section 6. Mobile-device users can scan the QR code below (a QR-code reader must already be installed on the device) to access the video content.

**Study Questions and CME Credit**

Each volume of the BCSC is designed as an independent study activity for ophthalmology residents and practitioners. The learning objectives for this volume are given on page 1. The text, illustrations, and references provide the information necessary to achieve the objectives; the study questions allow readers to test their understanding of the material and their mastery of the objectives. Physicians who wish to claim CME credit for this educational activity may do so by following the instructions given at the end of the book.

**Conclusion**

The Basic and Clinical Science Course has expanded greatly over the years, with the addition of much new text, numerous illustrations, and video content. Recent editions have sought to place greater emphasis on clinical applicability while maintaining a solid foundation in basic science. As with any educational program, it reflects the experience of its authors. As its faculties change and medicine progresses, new viewpoints emerge on controversial subjects and techniques. Not all alternate approaches can be included in this series; as with any educational endeavor, the learner should seek additional sources, including Academy Preferred Practice Pattern Guidelines.

The BCSC faculty and staff continually strive to improve the educational usefulness of the course; you, the reader, can contribute to this ongoing process. If you have any suggestions or questions about the series, please do not hesitate to contact the faculty or the editors.

The authors, editors, and reviewers hope that your study of the BCSC will be of lasting value and that each Section will serve as a practical resource for quality patient care.
Objectives

Upon completion of BCSC Section 6, *Pediatric Ophthalmology and Strabismus*, the reader should be able to

- describe evaluation techniques for young children that provide the maximum information gain with the least trauma and frustration
- describe the anatomy and physiology of the extraocular muscles
- explain the classification and diagnosis of amblyopia, as well as the treatment options
- describe the commonly used tests for the diagnosis and measurement of strabismus
- classify the various esodeviations and exodeviations, and describe the management of each type
- identify pattern and vertical strabismus, as well as special forms of strabismus, and formulate a treatment plan for each type
- describe the features of the various forms of nystagmus and understand their significance
- list the possible complications of strabismus surgery, and describe guidelines to minimize them
- design an approach to the diagnosis of decreased vision in children, and list resources available to these patients
- differentiate among various causes of congenital and acquired ocular infections in children, and formulate a logical plan for the diagnosis and management of each type
- list the most common lacrimal drainage system abnormalities seen in children and formulate a management plan
- list the most common diseases and malformations of the cornea, anterior segment, and iris seen in children
• describe the diagnostic findings and treatment options for childhood glaucoma
• identify common types of childhood cataract and other lens disorders
• construct a diagnostic and management plan for childhood cataracts
• identify appropriate diagnostic tests for pediatric uveitis
• differentiate among various vitreoretinal, optic disc, and metabolic diseases and disorders found in children
• list the characteristics of ocular tumors and phakomatoses seen in children
• describe the characteristic findings of accidental and nonaccidental ocular trauma in childhood