

# THE COLLEGE OF OPTOMETRISTS



## HIGHER QUALIFICATIONS INFORMATION PACK

### Glaucoma B

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## The College of Optometrists

<b>Certificate:</b>	Glaucoma Certificate B	<b>Module:</b>	1
<b>Module Title:</b>	Anatomy, physiology and pathophysiology of the glaucomas.		
<b>Module Size:</b>	10 credits		
<b>Assessment:</b>	Modules 1 2 & 3 of Certificate B are assessed together.		
<b>Pre-requisites:</b>	Glaucoma Certificate A	<b>Co-requisites:</b>	Modules 2 & 3
<b>Aims and Objectives:</b>			
To provide a physiological and pathophysiological basis for the understanding of the management of the glaucomas.			
<b>Learning Outcomes:</b>			
A specialist accredited level of knowledge and experience to work independently in Glaucoma Co-Management Service. An understanding of the relevant anatomy and physiology of the normal eye; a knowledge of the pathophysiology of the glaucomas and their relation to treatment.			
<b>Learning Strategies:</b>			
We are not able to offer training for this qualification. However, the following might be useful: distance learning courses, workshops on glaucoma (e.g. DOCET, Royal College of Ophthalmology, etc) and private study.			
We also recommend that you attend clinics at Eye Departments.			
<b>Outline Syllabus: Applied anatomy, physiology and pathophysiology in relation to glaucoma.</b>			
<p>Cornea, tear film, conjunctiva, lid function</p> <p>Uvea,</p> <p>Trabecular Meshwork</p> <p>Outflow obstruction</p> <ul style="list-style-type: none"> <li>- open angle</li> <li>- closed angle</li> </ul> <p>Neural retina</p> <p>Neural loss</p> <ul style="list-style-type: none"> <li>- mechanical</li> <li>- ischaemic</li> </ul> <p>Optic nerve</p> <p>Aqueous dynamics and IOP</p> <p>Receptors</p> <p>co-existing factors (e.g. ageing, cataract, pseudophakia, dual pathology)</p>			
<b>Suggested Reading:</b>			
<p>Alward, WLM, Colour Atlas of Gonioscopy. Foundation of the American Academy of Ophthalmology, 2001 (also available as <a href="http://www.gonioscopy.org">www.gonioscopy.org</a>).</p> <p>EASTY, D and SPARROW, J. Oxford Textbook of Ophthalmology, Oxford University Press (Oxford) 1999.</p> <p>DRANCE, S.M. Optic Nerve in Glaucoma. Kugler Publications, (Amsterdam) 1995.</p> <p>RITCH, R., SHIELDS, M.B. and KRUPIN, T. The Glaucomas (Volumes I, II and III) Mosby, (St Louis). 1996.</p> <p>SHIELDS, M.B. Textbook of Glaucoma (4<sup>th</sup> Edition) Williams and Wilkins (Baltimore) 1998.</p> <p>VARMA, R. &amp; SPAETH, G.L. The Optic Nerve in Glaucoma. Lippincott, (Philadelphia) 1993</p>			



**Suggested Reading:**

DRANCE, S.M. Optic Nerve in Glaucoma. Kugler Publications, (Amsterdam) 1995.

RITCH, R., SHIELDS, M.B. and KRUPIN, T. The Glaucomas (Volumes I, II and III) Mosby, (St Louis) 1996.

SHIELDS, M.B. Textbook of Glaucoma (4<sup>th</sup> Edition) Williams and Wilkins (Baltimore), 1998.

SPRY P.G.D. JOHNSON C.A. Identification of Progressive Glaucomatous Visual Field Loss. Surv. Ophthalmol. 2002 Mar-Apr; 47(2): 158-73 Review.

VARMA, R. and SPAETH, G.L. The Optic Nerve in Glaucoma. Lippincott, (Philadelphia) 1993

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<b>Certificate:</b>	Glaucoma Certificate B	<b>Module:</b>	3
<b>Module Title:</b>	Management of the glaucomas.		
<b>Module Size:</b>	10 credits		
<b>Assessment:</b>	Modules 1, 2 & 3 of Certificate B are assessed together. Details of examination format can be found in part 2 of the Information Pack.		
<b>Pre-requisites:</b>	Glaucoma Certificate A	<b>Co-requisites:</b>	Modules 1 & 2
<b>Aims and Objectives:</b>			
<p>To provide an understanding of the approach to, and the various treatment modalities for, the management of the glaucomas.</p>			
<b>Learning Outcomes:</b>			
<p>A specialist accredited level of knowledge and experience to work independently in Glaucoma Co-Management Service. A comprehensive knowledge of the rationale for, and mechanism of, the current therapeutic options in the management of the glaucomas.</p>			
<b>Learning Strategies:</b>			
<p>We are not able to offer training for this qualification. However, the following might be useful: distance learning courses, workshops on glaucoma (e.g. DOCET, Royal College of Ophthalmology, etc) and private study.</p> <p>We also recommend that you attend clinics at Eye Departments.</p>			
<b>Outline Syllabus:</b>			
<p>Approach to management</p> <ol style="list-style-type: none"> <li>a. The primary open angle glaucomas/normal tension glaucoma <ol style="list-style-type: none"> <li>1. establishment of diagnosis</li> <li>2. rationale of management</li> <li>3. concept of control</li> <li>4. target pressures</li> </ol> </li> <li>b. The primary closed angle glaucomas <ol style="list-style-type: none"> <li>1. establishment of diagnosis</li> <li>2. rationale of management</li> <li>3. concept of control</li> <li>4. target pressures</li> </ol> </li> <li>c. Ocular hypertension/glaucoma suspect <ol style="list-style-type: none"> <li>1. establishment of diagnosis</li> <li>2. rationale of management</li> <li>3. concept of control</li> <li>4. target pressures</li> </ol> </li> <li>d. The secondary glaucomas <ol style="list-style-type: none"> <li>i) common forms including pseudoexfoliation, pigment dispersion syndrome</li> <li>ii) less common forms</li> </ol> </li> </ol>			

1. establishment of diagnosis
  2. rationale of management
  3. concept of control
  4. target pressures
- e. congenital and juvenile glaucomas
1. establishment of diagnosis
  2. rationale of management
  3. concept of control
  4. target pressures

#### Treatment modalities

1. medical
  - a. topical medications
    1. established
    2. new
  - b. systemic
2. laser
  - a. trabeculoplasty
  - b. peripheral iridotomy
  - c. other (e.g. sclerostomy, iridotomy etc)
3. surgical
  - a. trabeculectomy
    - anti-fibrotic therapies (modulation of wound healing)
    - non-penetrating surgery
  - b. tube/valve surgery

#### Therapeutic options

- Mechanism of action and delivery
- Drug delivery systems
- Side effects
- Systemic interactions and drug interactions
- Contraindications
- Consent to medication
- Compliance

#### Medico-legal implications of glaucoma care

#### **Suggested Reading and References:**

- DRANCE, S.M. Optic Nerve in Glaucoma. Kugler Publications, (Amsterdam) 1995.
- DRANCE, S.M., Van BUSKIRK, E.M. & NEUFELD, A.H. Pharmacology of Glaucoma Williams and Wilkins (Baltimore) 1992.
- EUGS. Terminology and guidelines for Glaucoma. 2<sup>nd</sup> ED. (Dogma Publ.)
- GREHN & STAMPER, Glaucoma. (Springer) 2004.
- HODAPP, E., PARRISH, R.K. and ANDERSON Clinical decisions in glaucoma, Mosby (St Louis) 1993.
- RITCH, R., SHIELDS, M.B. and KRUPIN, T. The Glaucomas (Volumes I, II and III) Mosby, (St Louis) 1996.
- SHIELDS, M.B. Textbook of Glaucoma (4<sup>th</sup> Edition) Williams and Wilkins (Baltimore) 1998.
- VARMA, R. & SPAETH, G.L. The Optic Nerve in Glaucoma. Lippincott, (Philadelphia) 1993

**References:**

American Academy of Ophthalmology. Preferred Practice Pattern. Primary Open Angle Glaucoma.

American Academy of Ophthalmology. Preferred Practice Pattern. Primary Angle Closure Glaucoma (2005)

American Academy of Ophthalmology. Preferred Practice Pattern. Primary Open Angle Glaucoma Suspect (2005)

All AAO preferred practice patterns are available from  
<http://one.aao.org/ce/default.aspx>

Ophthalmology Clinics of North America (2000), Vol. 13 (3). Glaucoma Diagnosis & Management (book). Edited by J Liebmann.

Ophthalmology Clinics of North America (2005). Volume 18(3). Glaucoma. Edited by SD Smith. Elsevier Saunders (Philadelphia).