Brien Holden® VISION INSTITUTE ACADEMY

Global Optometry Resources

Binocular Vision Anomalies and Therapy 2

BINOCULAR VISION ANOMALIES AND THERAPY 2

STUDENT MANUAL

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COURSE OUTLINE

COURSE AIM

The module aims to provide the knowledge and skills to enable the student to understand and manage anomalies of binocular vision.

COURSE OBJECTIVES

On successful completion of the module, the student should be able to understand the mechanisms underlying anomalies in binocularity, appropriately diagnose them and manage them through vision therapy.

By the end of the module the student should be able to:

- describe the underlying causes of anomalies of binocular vision
- explain a diagnostic process to binocular vision problems
- classify anomalies of binocular vision
- describe the indications for vision therapy

COURSE CONTENT

The topics covered in this course include:

Binocular vision anomalies and therapy 1 (non-strabismus/amblyopia)

1. Introduction to binocular vision tests
2. Accommodation mechanism
3. Vergence & accommodation
4. Relative accommodation
5. Accommodative esophoria and exophoria
6. Vertical and cyclotorsional deviations
7. Fusional vergence dysfunction
8. Vision therapy techniques
9. Investigation and management of heterophoria
10. Pre-presbyopic accommodative anomalies

Binocular vision anomalies and therapy 2 (strabismus/amblyopia)

1. Diagnosis and management of amblyopia
2. Strabismus assessment
3. Esotropia
4. Exotropia
5. Further strabismus diagnoses

COURSE DELIVERY

This module is designed to be delivered over 1 year (2 semesters). Total delivery time for Binocular Vision Anomalies and Therapy is 84 hours of lectures.

In some contexts, BVAT needs to be divided into 2 courses, BVAT1 and BVAT2, each with 42 hours of lecture time. In these cases, BVAT1 will comprise units 1-10 which cover non-strabismic disorders of binocular vision. BVAT2 will comprise units 11 to 15 and will include chapters on strabismus and amblyopia.

Learning and Teaching Methods & Resources

The suggested teaching methods for this course include: PowerPoint presentations, case studies, discussions, simulations, and self-directed study.

Suggested equipment for teaching includes:

- Computer & projector
- White board
- Handouts

RECOMMENDED ASSESSMENT

- Written examination
- Assignments

TEXT BOOKS

Prescribed texts

- Brien Holden Vision Institute. Global Optometric Resource Modules, Brien Holden Vision Institute; 2014.
- Ansons AM and Davies H. Diagnosis and Management of Ocular Motility Disorders. 3rd Edition. Oxford: Malden, Mass. Blackwell Science. 2001.
- Caloroso EE and Rouse MW. Clinical Management of Strabismus and Amblyopia. Boston: Butterworth-Heineman. 1993.
- Evans BW. Pickwell's Binocular Vision anomalies, Investigation and Management. Butterworth-Heinemann; 2007.
- Griffin JF and Grisham JD. Binocular Anomalies: diagnosis and vision therapy. 4th Edition. Boston: Butterworth-Heineman. 2002.
- Scheiman M, Wick B. Clinical Management of Binocular Vision: Heterophoric, Accommodative, and Eye Movement Disorders. 3rd Ed. Philadelphia, PA: Lippincott; 2013.

Recommended texts

- Caloroso, Elizabeth E & Rouse, Michael W, Clinical Management of Strabismus and Amblyopia. Butterworth-Heineman, 1993
- Gerstenblith, AT, Rabinowitz, M. The Wills Eye Manual: Office and Emergency Room Diagnosis & Treatment of Eye Disease. Lippincott Williams and Wilkins; 2012.
- Ciuffreda, Kenneth J, Levi, Dennis M &Selenov, Arkady (1991) Amblyopia: Basic and Clinical Aspects. Boston; Butterworth-Heinemann.
- Eskridge JB, Amos JF, Bartlett JD, Clinical Procedures in Optometry, Philadelphia, PA: J.B.Lippincott Company, 1991.
- Kanski J, Bowling B. Clinical Ophthalmology: A systematic approach. 7e. Butterworth-Heinemann.; 2011.
- Schor, Clifton M &Ciuffreda, Kenneth J (1983) Vergence Eye Movements: basic and clinical aspects; Butterworths
- Van Noorden, Gunther K & Campos, Emilio C (2002) Binocular Vision & Ocular Motility: Theory & Management of Strabismus. Mosby.
- Weissberg, E, Essentials of Clinical Binocular Vision. Butterworth-Heinemann, 2004.

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3. Vergence & accommodation – introduction
4. Relative accommodation
5. Accommodative esophoria and exophoria
6. Vertical and cyclotorsional deviations
7. Fusional vergence dysfunction
8. Vision therapy techniques
9. Investigation and management of heterophoria
10. Pre-presbyopic accommodative anomalies

Binocular vision anomalies and therapy 2 (strabismus/amblyopia)

1. Diagnosis and management of amblyopic changes
2. Strabismus assessment
3. Esotropia
4. Exotropia
5. Further strabismus diagnoses

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