Ametropia/Ophthalmic Optics
Reflective Learning Module – February 2025

SECTION 1: REFERENCE-BASED QUESTIONS (questions 1-13)

These questions are based on the references listed below, which emphasize landmark studies, review of critical concepts, and new information relevant to optometry within the areas of ametropia and ophthalmic optics.

Topic: Evidence-based guidelines for adult eye and vision examinations (questions 1-4)
Reference: Evidence-based Clinical Practice Guideline: Comprehensive Adult Eye and Vision Examination, American Optometric Association 2015.
http://aoa.uberflip.com/i/578152-aoa-clinical-practice-guidelines-adult-eye-exam
Note: While you are encouraged to read the entire guideline, this module will focus on pages 10-30, with emphasis on action statements.

I. Epidemiology of eye and vision disorders in adults
II. Components of adult vision examinations
III. Recommended frequency of comprehensive eye and vision examinations
IV. Patient education and counseling
    a. Doctor-patient communication issues
    b. Lifestyle modifications to reduce ocular risks
    c. Dietary and nutritional effects on eye health
    d. Smoking cessation
    e. UV protection
    f. Trauma protection
V. Vision changes that increase fall risk

Topic: Myopia control
Reference: Clinical Report: Myopia Management, American Optometric Association, 2021.
https://aoa.uberflip.com/i/1388672-ebo-myopia-clinical-report-no-spread/0?

I. Factors influencing the development of myopia
    a. Genetic component
    b. Visual environment
II. Classification of myopia
III. Complications associated with myopia
IV. Risk factors for development/progression of myopia
V. Rate of axial elongation
VI. Tests/equipment needed for myopic management
VII. Factors to consider when initiating a myopia control program
VIII. Pharmacological treatment option
IX. Multifocal SCL
X. Orthokeratology
XI. Spectacle lenses

XII. Behavior modification
XIII. Follow up and cessation of treatment

Topic: Effects of blue light

References: Downie, L. Blue light filtering ophthalmic lenses: To prescribe, or not to prescribe? Ophthalmic Physiol Opt. 2017 Oct.
https://onlinelibrary.wiley.com/doi/full/10.1111/opo.12414

Lawrenson JG, Hull CC, Downie LE. The effect of blue-light blocking spectacle lenses on visual performance, macular health and the sleep wake cycle: a systematic review of the literature. Ophthalmic Physiol Opt. 2017 Nov.
https://onlinelibrary.wiley.com/doi/full/10.1111/opo.12406

I. "Blue-light hazard" definition and sources
II. Potential benefits of blue light filters (marketing claims)
III. Potential adverse effects of blue light filters
IV. Evidence or lack of evidence of photoreceptor damage
V. Need for additional research

SECTION 2: FUNDAMENTAL KNOWLEDGE QUESTIONS (questions 14-20)

These questions are considered "fundamental knowledge" within the areas of ametropia and ophthalmic optics. This is information that has not changed substantially in the past 5-10 years, and with which all optometrists should be familiar or be able to access quickly.

The following outline is provided as a guide for this section.

I. Spectacle correction of ametropia
   a. Demographics of refractive errors based on age, ethnicity
   a. Patient education on safety factors of eyewear and materials
   b. Spectacle lens designs or optical materials recommendations
   c. Prismatic correction (slab off, induced prism)
   d. Troubleshooting issues due to spectacle lens fabrication or frame selection
II. Vision rehabilitation/low vision
   a. Collection of specific patient history and demographic data
   b. Specific testing to assess visual status and determine management plan
   c. Treatments offered by primary care optometrists (high adds, simple magnifying devices, lighting recommendations, lifestyle changes)
   d. Knowledge of treatment/management techniques used by vision impairment/low vision specialists

The following AOA Consensus-Based Clinical Practice Guidelines are recommended as a review of general concepts, but are not required.

Care of the Patient with Myopia (CPG 15)

Care of the Patient with Hyperopia (CPG 16)
Care of the Patient with Presbyopia (CPG 17)