

Recorded Lectures - Multiple Choice Answers

The Long & Short of Myopia Management

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Six of the following questions were presented online following a recorded lecture video to entrants to comply with the General Optical Council's best practice specification for this type of CET.

Q1. Myopia can be defined as:

- a) Refractive error greater than or equal to -5.00 Dioptres
- b) Refractive error greater than or equal to -0.50 Dioptres
- c) Refractive error greater than or equal to -0.25 Dioptres
- d) Refractive error of up to -10.00 Dioptres

b is the correct answer. A paper by Holden et al. defines myopia as '*refractive error of greater than or equal to -0.50 D*'. In this definition, greater than refers to more minus. [https://www.aaojournal.org/article/S0161-6420\(16\)00025-7/fulltext](https://www.aaojournal.org/article/S0161-6420(16)00025-7/fulltext)

Q2. High Myopia can be defined as:

- a) Refractive error of greater than or equal to -10.00 Dioptres
- b) Refractive error less than -5.00 Dioptres
- c) Refractive error less than -10.00 Dioptres
- d) Refractive error greater than or equal to -5.00 Dioptres

d is the correct answer. The World Health Organisation defines High Myopia as: '*refractive error greater than or equal to -5.00 D*'. In this definition, greater than refers to more minus. <https://www.who.int/blindness/causes/MyopiaReportforWeb.pdf>

Q3. Vision loss can be attributed to High Myopia. The term '*myopic macular degeneration (MMD)*' is used to define:

- a) The retinal condition that causes vision impairment in myopia
- b) All pathology in myopic patients
- c) Specific pathology in myopic patients of the retina, choroid and crystalline lens
- d) The retinal condition that causes vision impairment in all patients whether myopic or not.

a is the correct answer. The **clinical** definition of MMD is "*a vision-threatening condition in people with myopia, usually high myopia, which comprises diffuse, patchy macular atrophy with or without lacquer cracks, choroidal neovascularization and Fuchs spot.*"

<https://www.who.int/blindness/causes/MyopiaReportforWeb.pdf>

Q4. All GOC registrants should be able to discuss (with patients) the increased risk of eye pathology later in life as a consequence of myopia. Pathologies include:

- a) Myopic maculopathy and retinal detachment
- b) Certain types of cataract and glaucoma
- c) Increased risk of retinal detachment and glaucoma
- d) Myopic maculopathy, certain types of cataract, glaucoma and retinal detachment.

d is the correct answer. Flitcroft in his 2012 paper suggests: *“the most important impact of myopia, in terms of public health, is as a risk factor for other potentially blinding ocular pathologies”*

<https://www.opt.uh.edu/onlinecoursematerials/PHOP6241/Berntsen/Fall%202017/Flitcroft%20Review%20Reading%20Assignment.pdf>

Q5. Recent research suggests that time spent outdoors helps delay the onset of myopia. How long should be spent outdoors to be beneficial?

- a) An increase of 30 minutes per day
- b) An increase of 60 minutes per day
- c) An increase of 90 minutes per day
- d) An increase of 120 minutes per day

d is the correct answer. Paul Gifford when referring to Xiong et al. (2017) suggests an increase of 2 hours per day to be beneficial in delaying or preventing the onset of myopia.

<https://www.myopiaprofile.com/why-outdoor-time-matters-in-myopia-development/>

Q6. When using Atropine Drops as a treatment strategy for the management of myopia, the concentration of Atropine typically used is:

- a) 0.1%
- b) 0.02%
- c) 0.01%
- d) 0.2%

c is the correct answer. There is wide debate on this topic, however, Chia et al. (2016) suggests that *“Over 5 years, atropine 0.01% eyedrops were more effective in slowing myopia progression with less visual side effects compared with higher doses of atropine”*

<https://pubmed.ncbi.nlm.nih.gov/26271839/>

Q7. Atropine drops are a pharmacological strategy to manage myopia. Other treatment strategies include:

- a) Specialist spectacle lenses, specialist contact lenses and orthokeratology
- b) Under correction of refractive error
- c) Gas permeable contact lenses
- d) Single vision spectacles

a is the correct answer. Numerous strategies & treatment options exist today for the treatment of myopia. Refer to Smith, M J & Walline, J (2015)
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4542412/>

Q8. Risk factors for becoming myopic are:

- a) Ethnicity, age and parental myopia
- b) Age, parental myopia, gender, environmental factors and ethnicity
- c) Environmental factors, gender and parental myopia
- d) Ethnicity, environmental factors and age

b is the correct answer. Risk factors for a child becoming myopic are numerous. Recko et al. (2015) cite ethnicity, age, parental myopia, Gender and environmental Factors as risk factors.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6170055/>

Q9. After 1st January 2021, Britain will no longer be a member of the European Community. Many products we use bear the highly recognisable CE mark. What distinctive mark will be used after 1st January 2021?

- a) UKCA mark in UK and CE mark in Europe
- b) The CE mark will continue to be used for all products
- c) Only the UKCA mark
- d) There will be no distinguishing marks on products.

a is the correct answer. The UKCA (UK Conformity Assessed) marking is a new UK product marking that will be used for goods being placed on the market in Great Britain (England, Wales and Scotland). It covers most goods which previously required the CE marking. Additionally, the UKCA marking will not be recognised on the EU market. Products currently requiring a CE marking will still need a CE marking for sale in the EU from 1 January 2021.
<https://www.gov.uk/guidance/using-the-ukca-mark-from-1-january-2021>