Paediatric optometry: assessment and management of children
Performing an optometric assessment of a young child can be challenging but has the potential to greatly improve the child’s well being.

The ageing eye
Examining the older patient requires a range of tests of visual function and the ability to distinguish the normal, healthy ageing eye from the abnormal.

Myopia control: can we really make a difference?
With the prevalence of myopia increasing worldwide, methods of controlling myopic progression are a key focus for current research.

Macular carotenoids and age-related macular degeneration
Prevention is key in patients with or at risk of AMD, and lifestyle changes, nutritional supplements and dietary advice may all have a role to play.

Psychological insights into presbyopia
Understanding the impact of presbyopia and the decisions that patients make in practice is important to meeting their individual needs.

Contact lenses in the modern family
Keeping all the family in contact lenses is about embracing change and always ensuring the right lens for each life stage.
• Always use tests appropriate to the child’s age and abilities

• Be familiar with normal refractive development, expected visual standards, and the prevalence and range of refractive error, for each age group

• Use cycloplegic refraction and dynamic retinoscopy to elicit the full refraction and measure accommodation

• Full refractive correction can be successful in treating amblyopia

• The optimum dose for occlusion of amblyopes is thought to be less than previously recommended. A majority of gain is achieved in the first few weeks

• Children can successfully wear contact lenses with few complications, enjoy a high quality of life as well as visual benefits

• Children are not time-consuming to fit although more time may be needed for instruction in lens application and removal

Use this in your practice to:

• Upgrade your techniques for examining young children

• Invest in equipment and expertise to ensure that appropriate tests are in place

• Ensure that you select the correct test for the child’s age and abilities and interpret the results accordingly

• Build your confidence in managing the child patient

Recommended reading suggested by Dr. Catherine Viner


The prevalence of myopia is increasing and there are wide regional and ethnic differences. Factors influencing myopia development are both genetic and environmental but genetic factors have greater effect. Limited outdoor activity combined with intense near work places the eye at risk of developing myopia. Outdoor activity (2-3 hours per day) may have a protective effect. The most significant structural factor in myopia progression is an increase in axial length. The peripheral retinal signal is an important factor in myopic progression. Because of global differences in retinal shape, different approaches are needed if ‘anti-myopia’ treatment is to be successful. Contact lenses have more potential than spectacles for myopia control. Prescribing bifocal spectacles to children with a family history of myopia and esophoria at near may slow myopic progression.

Use this in your practice to:

- Keep up with the latest research into the causes and development of myopia
- Explain to patients, and parents, that myopia research is an increasing priority
- Look out for improved methods of correction in prospect for the future

Recommended reading suggested by Dr. Ed Mallen

Patients use a variety of coping strategies to deal with the onset of presbyopia including humour. Recognise the individual's coping strategy and work with it.

Presbyopia happens alongside other life-changing experiences and can be a sensitive issue.

Don’t make assumptions about presbyopes' lifestyles, such as asking them about gardening, knitting and crossword puzzles!

Don’t assume that presbyopes are reluctant to spend money on vision correction.

Presbyopes are often happy to try new things, such as new progressive lenses and contact lenses.

Turn negative emotions into positives, provide information to change attitudes and work on beliefs and values.

Start managing presbyopia early, such as by measuring accommodation and explaining relevance to pre-presbyopes.

Listen to what the patient is telling you and show empathy. Identify and overcome barriers and build confidence.

Explain your recommendations, the pros and cons of the different options and allow patients to make an informed choice.

Use this in your practice to:

- Gain a better understanding of the psychological impact of presbyopia and the decisions that patients make in practice.
- Adapt your communication style to meet the needs of individual patients.
- Keep an open mind about presbyopes' lifestyles and aspirations.
- Help presbyopes recognise the advantages that their eyewear gives them.

Recommended reading suggested by Dr. Fiona Fylan:


Insights & inspiration

The ageing eye

- Life expectancy (in the developed world) is increasing and will have an impact on optometric practice
- Today’s optometry graduates can expect to spend about 75% of their working life examining patients over 65
- Age is a risk factor for almost every human disease, including eye diseases
- There are also important changes in visual function with age, especially in mesopic lighting conditions
- High contrast visual acuity tests can mask age changes in the eye. Use low contrast and LogMar acuity charts that go beyond 6/5 (down to -0.4) to elicit accurate measurements and make meaningful comparisons over the lifespan
- Loss of visual function with age is at least partly neural rather than optical
- Dark adaptation, colour vision and glare recovery are among other aspects of visual function affected by age
- Light scatter in the ocular media increases with age. Introduce a glare source and use low contrast charts to elicit the effects

Use this in your practice to:

- Prepare to see increasing numbers of elderly patients
- Distinguish the normal, healthy, ageing eye from the abnormal
- Equip your practice with a broader range of tests of visual function
- Diagnose and manage a range of age-related conditions

Recommended reading suggested by Prof. David Thomson

The causes of AMD are oxidative stress and cumulative blue light damage

Prevention is key. Although anti-VEGF treatment can be successful in wet AMD, issues with complications, timing and cost remain

Established factors in AMD are age, smoking and family history. Possible factors include diet, light exposure, obesity, cardiovascular disease and low macular pigment levels

Nutrition and macular pigment are important across the whole lifespan

Identify at risk individuals and introduce preventative measures before macular changes appear. The number one recommendation is not to smoke

Use Sightrisk www.sightrisk.com to gather information on risk factors and produce a customised prevention plan

A healthy, balanced diet is important for general eye health and helps protect against age-related eye disease

Make sure any dietary supplements you recommend are supported by science and by safety data

Use this in your practice to:

• Update your knowledge of modifiable risk factors in AMD
• Take a preventative approach to AMD by advising patients on lifestyle changes and other risk reduction measures from an early age
• Recognise the role of macular pigment in AMD development and progression
• Give patients accurate advice on diet and dietary supplements

Recommended reading suggested by Dr. John Nolan


Insights & inspiration

Contact lenses in the modern family

- Proactively recommend contact lenses to children and parents
- Discuss UV protection with all patients, not just those at increased risk
- Soft torics are now easy to fit, provide excellent vision and comfort is comparable to spherical lenses
- Compliance with replacement frequency is a patient issue not a lens issue
- Wavers who report dryness with prolonged VDU use can download an icon reminding them to blink at www.dryeyezone.com
- Materials properties other than Dk/t are important in soft lens comfort
- Multifocals are a longer term solution for new presbyopes than monovision
- For patients, the advice and recommendation of their eye care practitioner is the prime factor in choice of vision correction
- Keeping all the family in contact lenses is about embracing change and always ensuring the right lens for each life stage

Use this in your practice to:

- Understand the demands of busy, modern lives on contact lens wearers
- Maintain satisfaction to keep them in contact lenses for many years to come
- Recognise the importance of asking clear and detailed questions at aftercare
- Manage any issues in order to maintain happy, healthy lens wear

Recommended reading

Walline J. New findings on contact lenses for children and teens. 2010

Walsh K. How exposed are you? UV and your practice. 2009


Top Tips for Eye Health