# Scleral lens in practice

Q&A CONTACT US
...and let our panel of experts answer your queries

**Q** **Scleral lenses seem to be enjoying renewed interest at the moment. Why should this be and is it really feasible to start fitting them in high-street practice?**

**A** **Jennifer McMahon replies**: It is true to say that the term 'scleral lens' continues to conjure up images of eye impressions, PMMA, fenestrations, bubbles and time-consuming, cumbersome modifications, in the minds of many.

A scleral lens *per se* is one that bears solely on the sclera. In order to give a minimum 1mm scleral bearing annulus and 1mm circumferential limbal clearance, assuming a corneal diameter of 12 mm then by definition a scleral lens must be 16mm or greater in diameter. The term has been more loosely applied to corneal lenses large enough to extend beyond the limbus in recent times which can confuse the issue somewhat.

The advent of RGP materials for the manufacture of scleral lenses has transformed the picture as the vast majority of cases can now be fitted from preformed trial sets with simultaneous assessment of optic and scleral zone characteristics.

Corneal swelling studies have indicated that RGP scleral lenses yield sufficient oxygen flux to maintain reasonably normal corneal physiology and thus, in the absence of the requirement for fenestrations, scleral lenses can now be fitted with complete corneal clearance and without the troublesome bubbles, settling back or reproducibility issues of old.

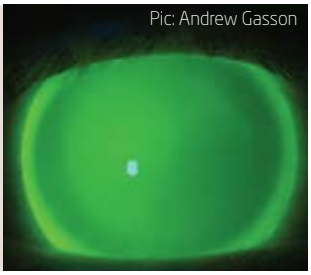
The main indication for scleral lenses is keratoconus, accounting for around 60 per cent of fittings. As the lenses are designed to vault the cornea and subsequently optically neutralise any surface irregularities they may also be used for visual rehabilitation in post corneal transplant, secondary ectasias and corneal degenerations. The retention of a pre-corneal tear reservoir behind the lens during wear has proved useful in the maintenance of corneal hydration in ocular surface disorders and their large size allows use for protection from environmental factors and the potential to assist with eyelid disorders.

The simplified fitting process also means that scleral lenses can be successfully used in the management of lower grade pathology where other lens types have proved unsuccessful or are not appropriate.

The reality is the scleral lens fitting process itself is relatively straightforward these days, but the pathology for which scleral lenses are indicated is complex. The patients often have a complicated history and a future requiring a considerable investment of time and understanding into their continuing management by the contact lens practitioner.

● **Jennifer McMahon** is a specialist optometrist at Oxford Eye Hospital and clinical consultant to Innovative Sclerals

● **Answer to What's this 04.11.11**
A hydrogel soft lens impregnated with fluorescein is illuminated with blue light on the slit lamp. The intense colour shows the merit of using a yellow filter for observation. These filters are often freely available from contact lens laboratories.


Pic: Andrew Gasson