An Introduction to Scleral Lenses

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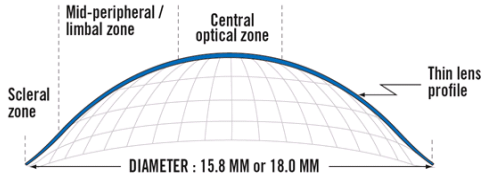
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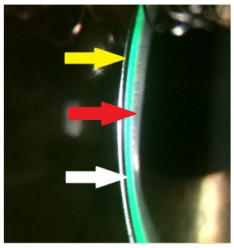
Scleral contact lenses have been a part of management and treatment of corneal disease since the 19th century. Due to difficulty with manufacturing, improper fitting and poor patient comfort, scleral lenses were not as frequently used as rigid gas permeable lenses. Significant advances in technology have allowed scleral lenses to become a more important player in the management of diverse groups of conditions. The development of high Dk lens material, the same used for rigid gas permeable lenses, has reduced hypoxic related complications that prevented scleral lenses from being the primary lens used for corneal conditions. These new lenses have increased oxygen permeability, tear flow and are able to vault the limbus appropriately preventing limbal cell damage. The enhancement in design features of scleral lenses is evidenced by the various eye conditions treated, including ocular surface disease, keratoconus, pellucid marginal degeneration, post-operative or post-trauma corneal disease, and irregular astigmatism. By creating a smooth refractive surface, scleral lenses have optimized visual performance and clarity. Scleral lenses have given patients increased options for visual enhancement without requiring surgery or the need for glasses. This lecture will guide practitioners through a basic scleral lens fitting starting from lens selection to fit evaluation.

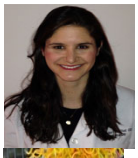
Image: Scleral Lens Classifications: Eef van der Worp

Terminology

	Alternative Names	Diameter	Bearing	Tear Reservoir
Corneal		8.0 to 12.5 mm	All lens bearing on the cornea	No tear reservoir
Corneo-scleral	Corneal-Limbal Semi-scleral Limbal	12.5 to 15.0 mm	Lenses share bearing on the cornea and the sclera	Limited tear reservoir capacity
(Full) Scleral	Haptic	15.0 to 25.0 mm	All lens bearing is on the sclera	
		Mini-scleral 15.0 to 18.0 mm		Somewhat limited tear reservoir capacity
		Large-scleral 18.0 to 25.0 mm		Almost unlimited tear reservoir capacity









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