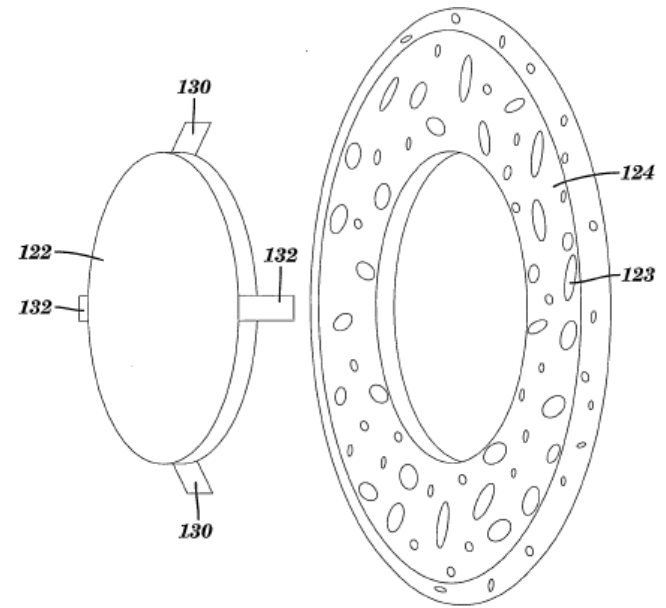
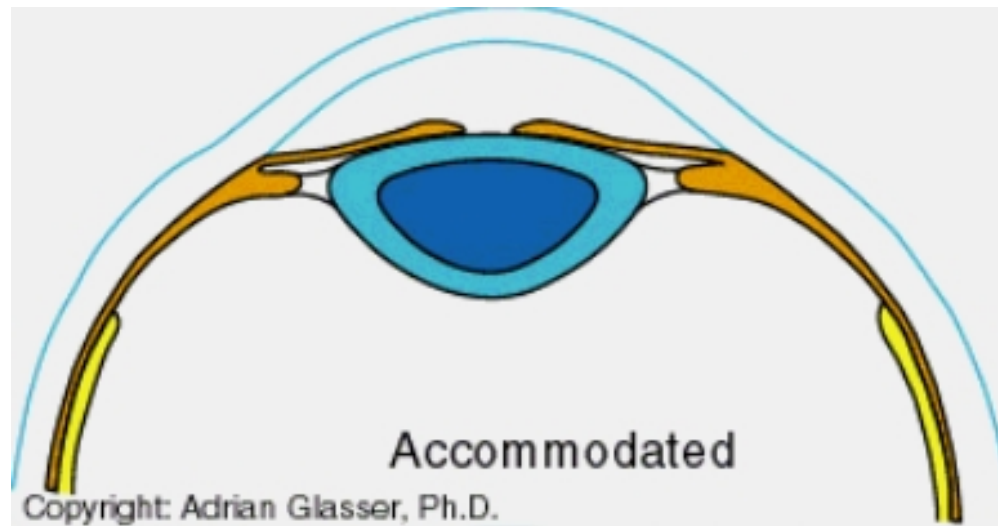
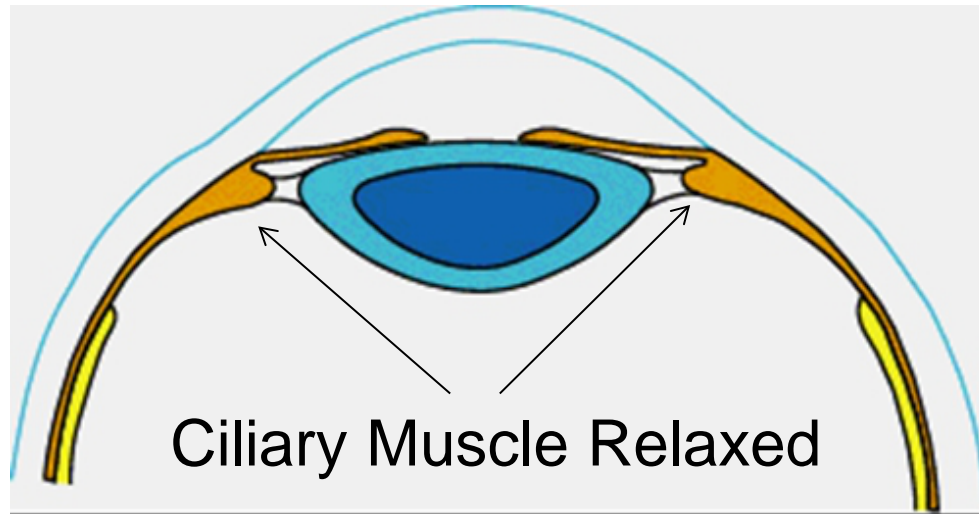




Accommodating Intraocular Lens and Conversion Plate

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The eye focuses via “accommodation”, in which the lens changes shape. A conundrum: when the ciliary muscle is relaxed, the lens is stretched and flat (distance viewing); when the ciliary muscle contracts, the lens relaxes to a rounder shape (close viewing)

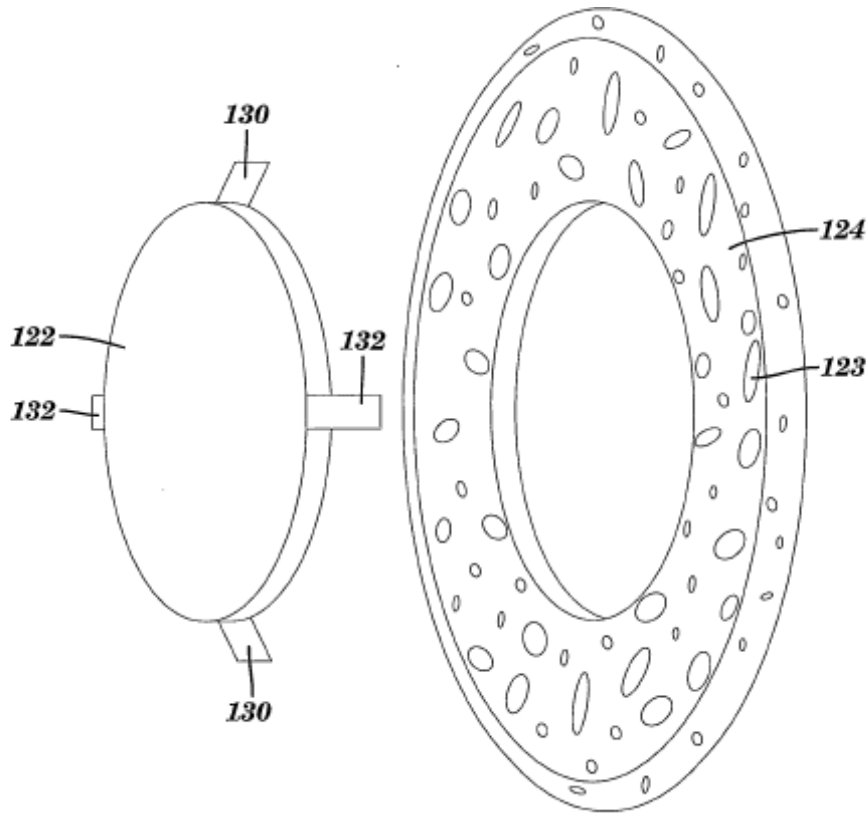
Mechanism for Accommodation?

- A debate – is ciliary muscle the primary driver, or is pressure from vitreous (caused by compression of sclera) most important?
- Affects design of accommodating IOLs.



Most are like this – have “wings” that allow ciliary muscle to change shape

IOL designed under theory that accommodation is driven by vitreous pressure



Can develop separate “conversion plates” to allow other companies’ lenses to accommodate via vitreous as well

Current IOL designs	Coleman/Glasser solution
Single unit must address both capsular bag size and dioptric lens power	Two piece design with separate optic and haptic plate – haptic plate is toroidal, flexible, and porous or fenestrated
Requires large inventory or less than optimal sizing	Lower inventory cost; Allows for optimal sizing in capsular bag <u>and</u> optimal sizing for dioptric lens power
Winged haptic design	360° of continuous haptic support and larger contact surface area between haptic/optic and vitreous provide greater stability and improved accommodative performance
The removal or replacement of traditional IOLs is made very difficult by fibrosis of the lens/haptic to the capsular/zonular support structure. (e.g. in pediatric setting or rare cases of mis-measurement)	After insertion, optic may be replaced or rotated with less trauma

Indications, Markets, M&A

- Cataracts and Presbyopia
- “Intraocular Lenses Market to Reach \$5.0 billion by 2015, According to New Report by Global Industry Analysts, Inc.”
- Interest by big pharma
 - Abbott acquired AMO for \$2.8B in 2009
 - Jan 2010 Novartis announced takeover of Alcon 77% majority worth \$38.5B

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