

DELIGHTING ASTIGMATS or..... Don't Fear the Cyl.....



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The Opportunity with Astigmatism

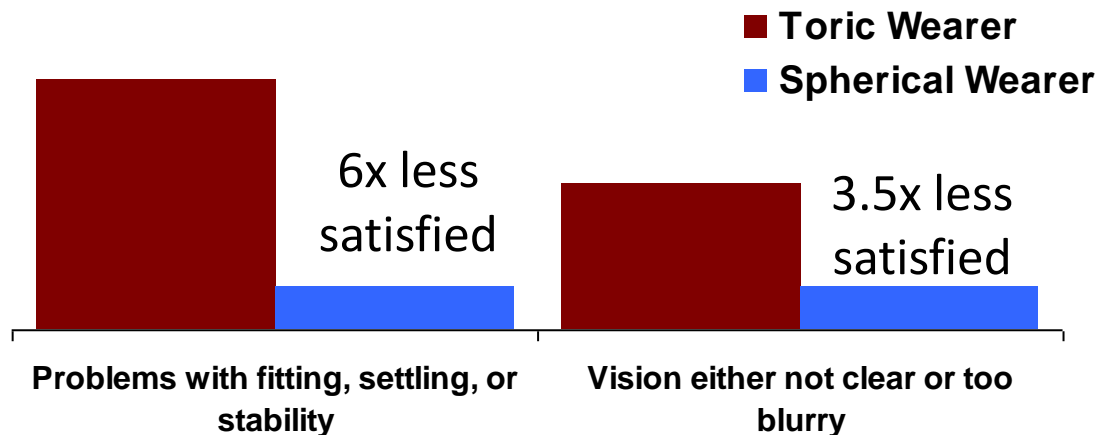
- Some Numbers
- Some Myths
- Some Designs
- Some Challenges
- Some Research
- Fitting Tips
- Some Considerations



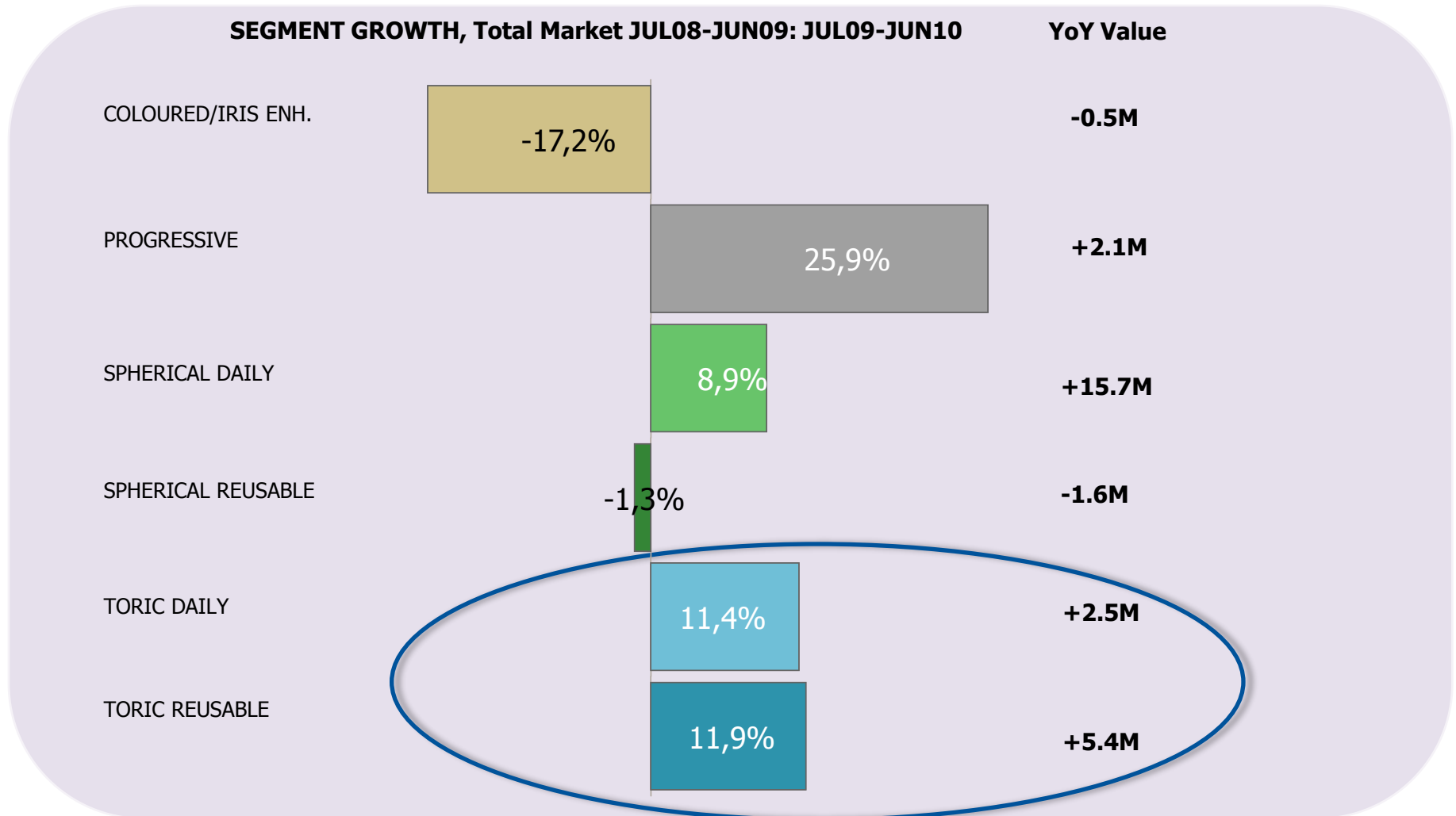
SOME NUMBERS

Some Numbers about Astigmatism

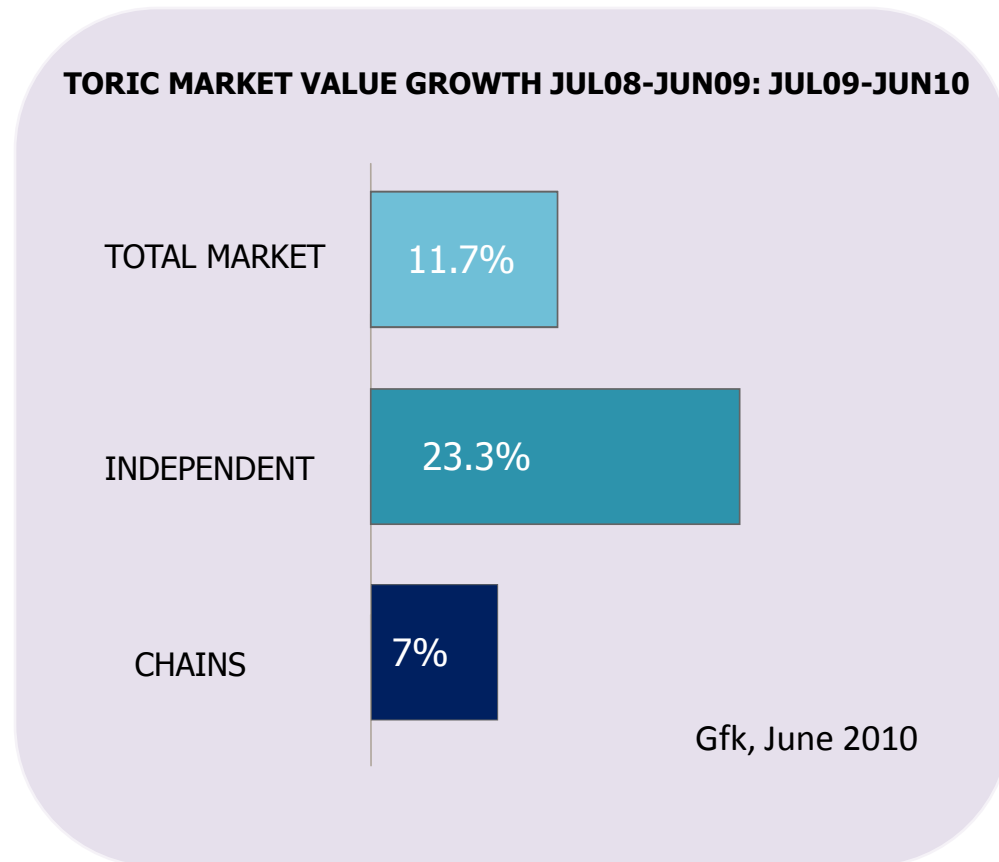
- 45% of CL candidates have ≥ 0.75 cyl¹
- Torics wearers comprise only 28% of market²
- 45% astigmats unaware toric CLs exist³
- High level of dissatisfaction with vision³



Toric lenses are growing...fast



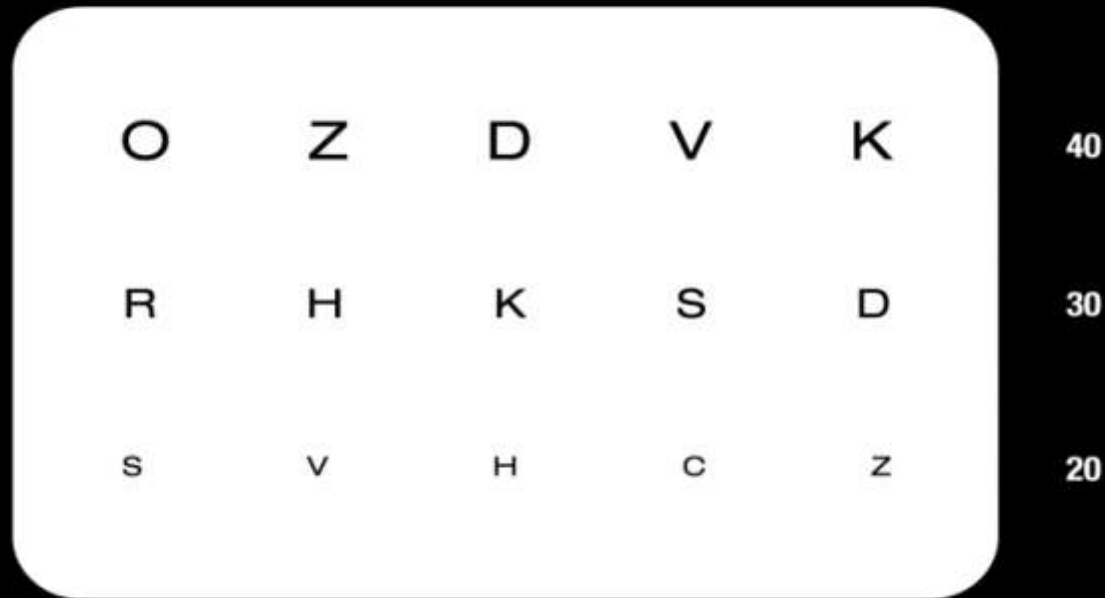
Is Boots Missing the Opportunity?



Only 16-18% of Boots CL wearers have Toric lenses

SOME MYTHS

Myth #1: It's not worth correcting 0.75 cyls

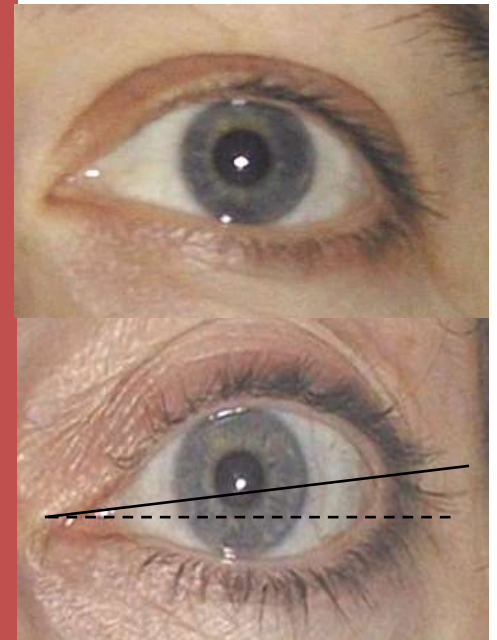
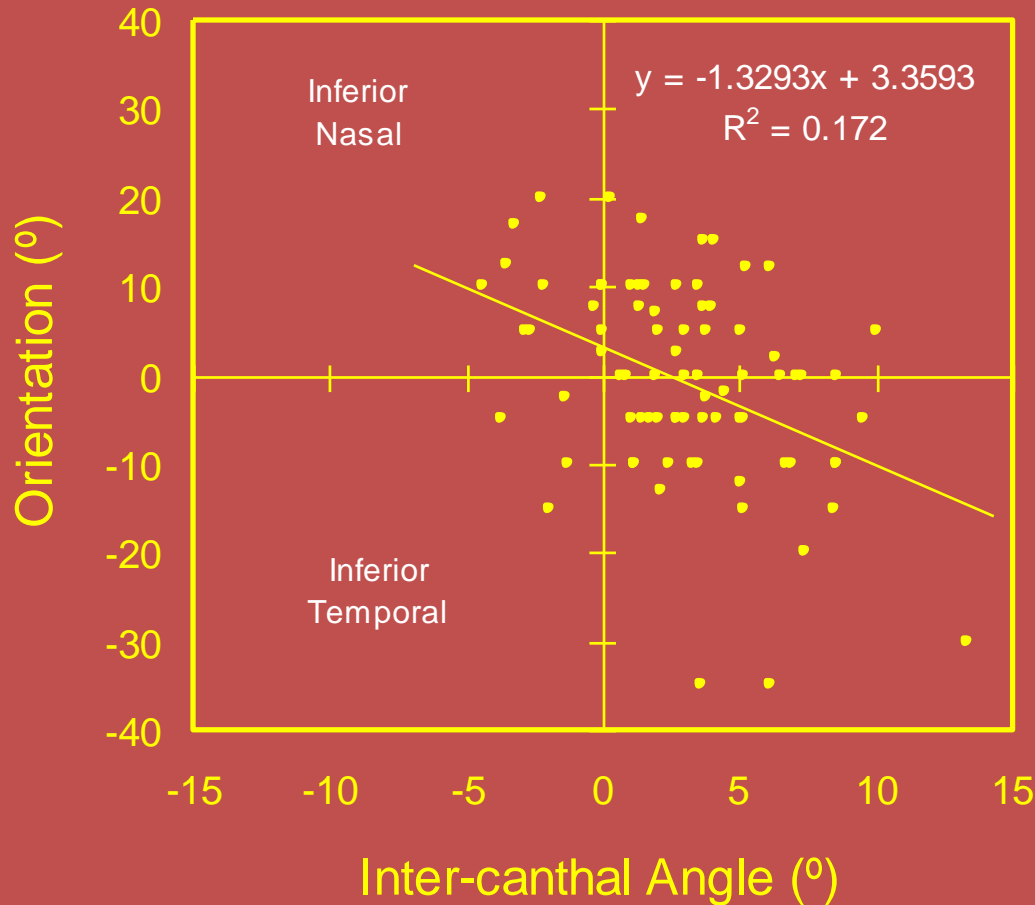


O	Z	D	V	K	40
R	H	K	S	D	30
S	V	H	C	Z	20

Myth #2: Aspheric lenses mask low cyls

- Study¹ compares visual performance toric soft, aspheric soft contact lens & spectacles with low levels astigmatism
- For typical pupils, vision superior with toric soft CLs and spectacles vs. Aspheric CLs by half-line or more
- Superior vision achieved for low astigmats using toric rather than aspheric CLs

Myth #3: Soft torics tend to rotate nasally



Myth #4: All patients understand the word

He says 'You
have
Astigmatism'



She hears
'You're
stigmatised'

Myth #5: All patients are happy



60% Wearers are Unhappy with Visual Quality

- In day to day activities not identified in practice

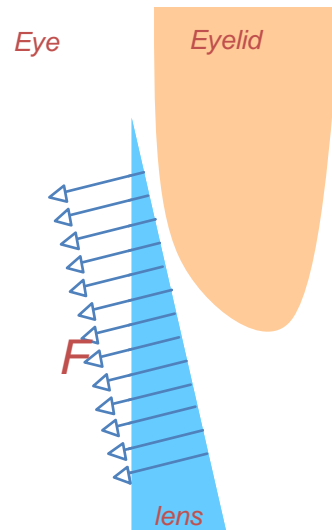
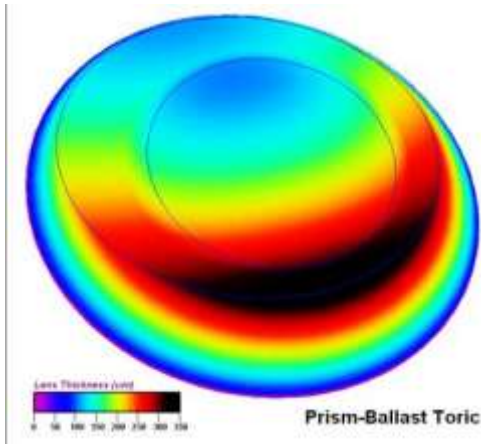


N=224 JJVC data on file 2009

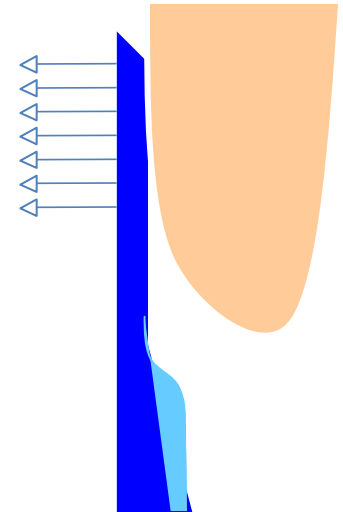
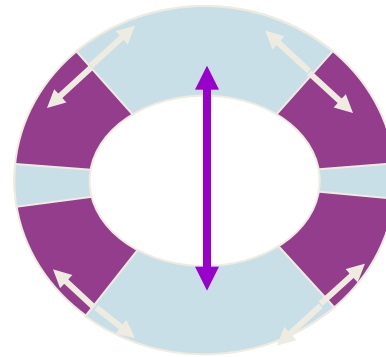
Some Designs

Fundamentals in Toric Lens Designs

Asymmetrical:
Prism Ballast

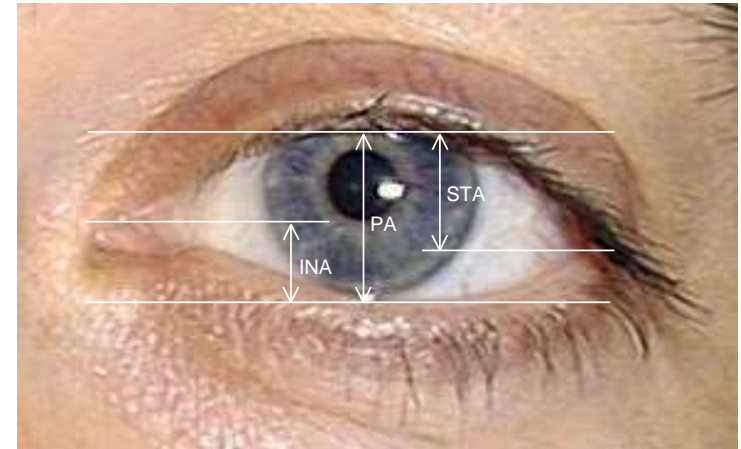
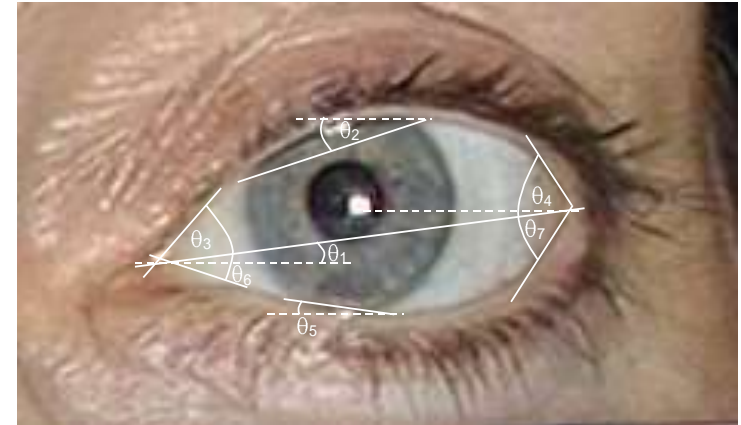


Symmetrical:
Accelerated Stabilisation
Design



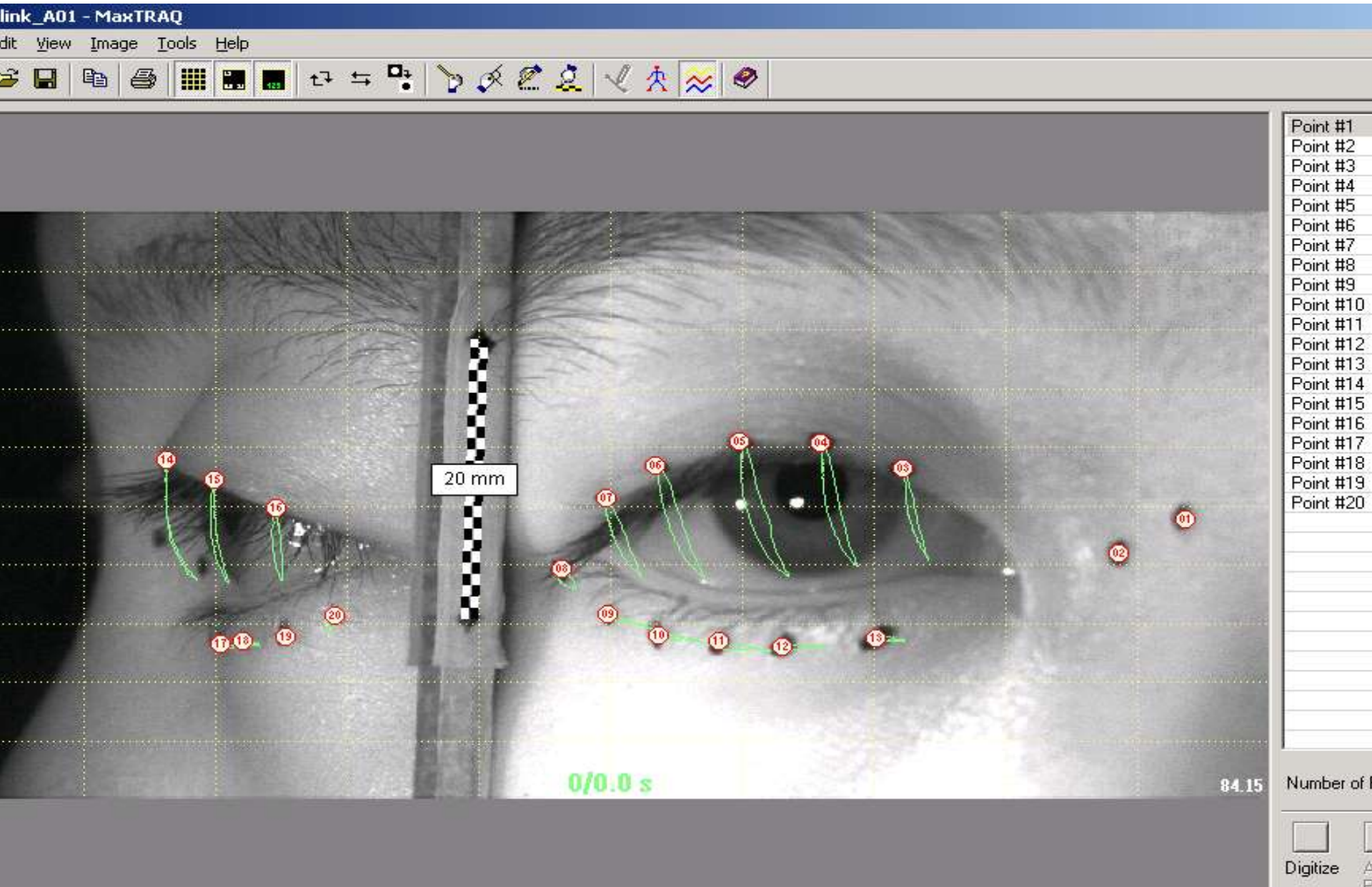
Some Challenges

Challenge #1: Anatomical Variations



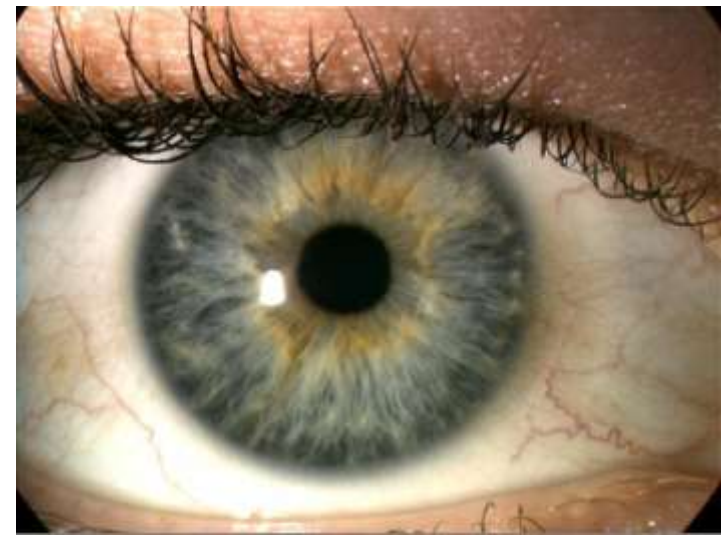
- Lid position / globe interactions
- Angles & Apertures

Challenge #2: Lid Movements

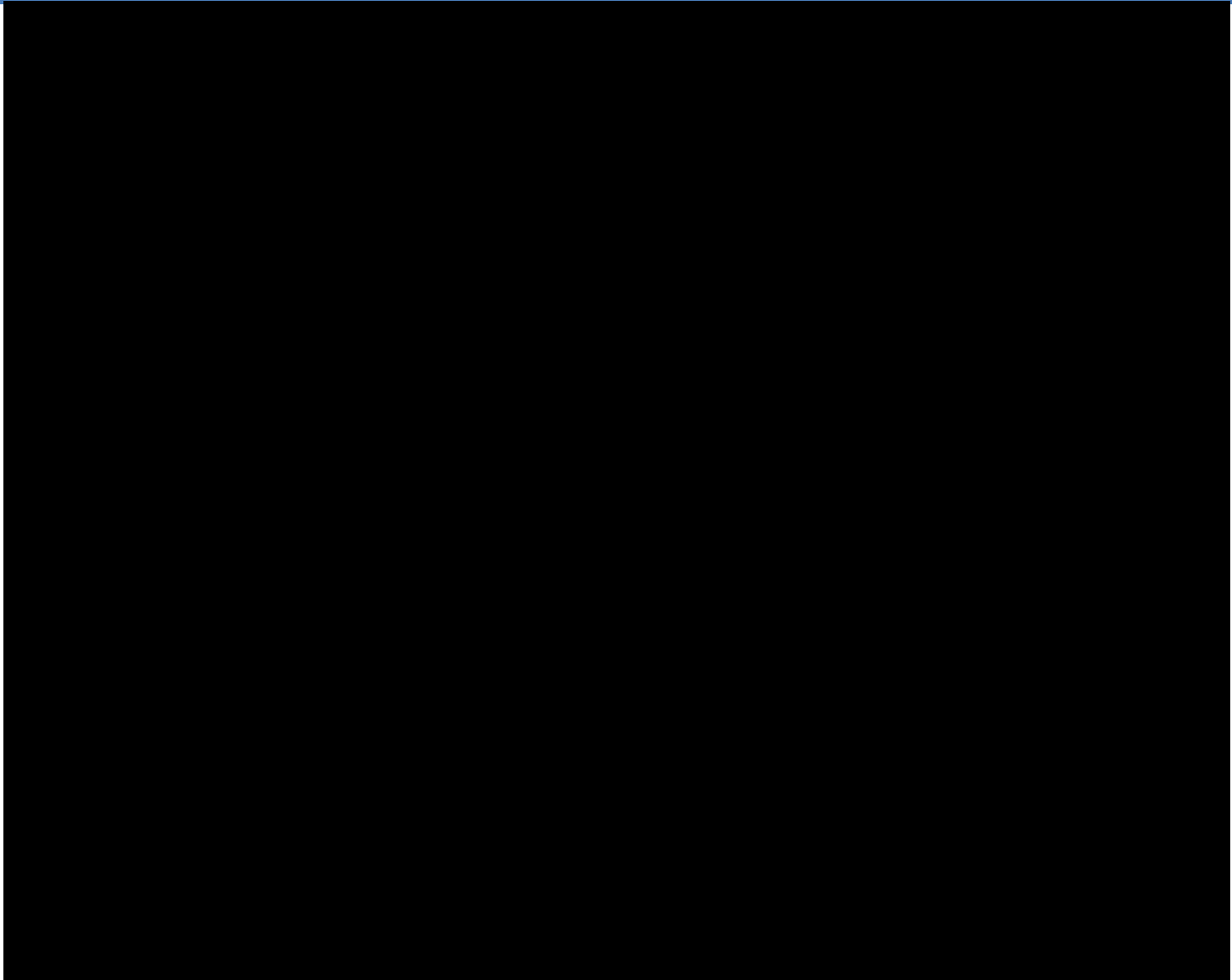


Challenge #3: Other Potential Variables

- Palpebral aperture
 - Smaller = more stable lens
- Lid tension
 - Tighter lids = greater instability?
- Degree of Myopia
 - More myopia = more unstable orientation

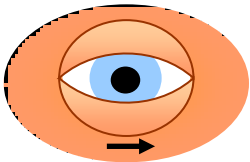


Challenge #4: EYE Movements

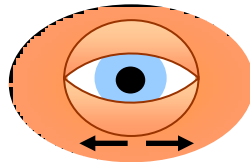


The Range of Eye Movements

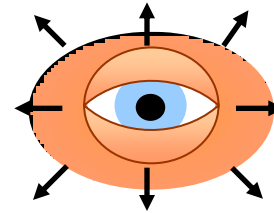
- Toric lens designs are affected by multiple eye movements



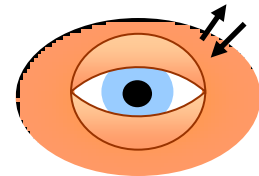
Blink



Versional
tasks



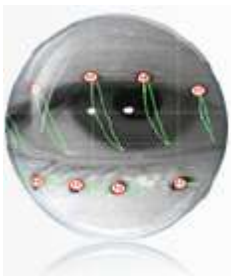
8 Cardinal
Directions



Saccadic
Diagonal
Gaze

Blinking

Eye movements



Challenge #5: Gravity



Some Research

Peer-Reviewed Research on Toric Lens Stability

ORIGINAL ARTICLE

Rotational Stability of Toric Soft Contact Lenses During Natural Viewing Conditions

GEORGE A. ZIKOS, OD, MS, SYLVIA S. KANG, OD, PhD,
KENNETH J. CIUFFREDA, OD, PhD, FAAO, ARKADY SELENOW, OD, FAAO, STEVEN ALI, OD,
L. WAYNE SPENCER, BS, ROCCO ROBILOTTO, OD, PhD, and MELISSA LEE, OD, MS

*Manhattan Vision Associates/Institute for Vision Research, New York, New York (GAZ, SSK, KJC, AS, SA, LWS, RR, ML), and SUNY
State College of Optometry, Department of Vision Sciences, New York, New York (KJC, RR, ML)*



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BCLA
British Contact Lens Association



Toric lens orientation and visual acuity in non-standard conditions

Roberta McIlraith, Graeme Young*, Chris Hunt

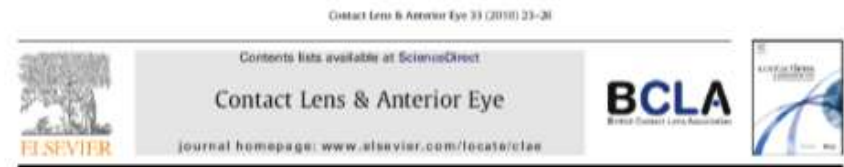
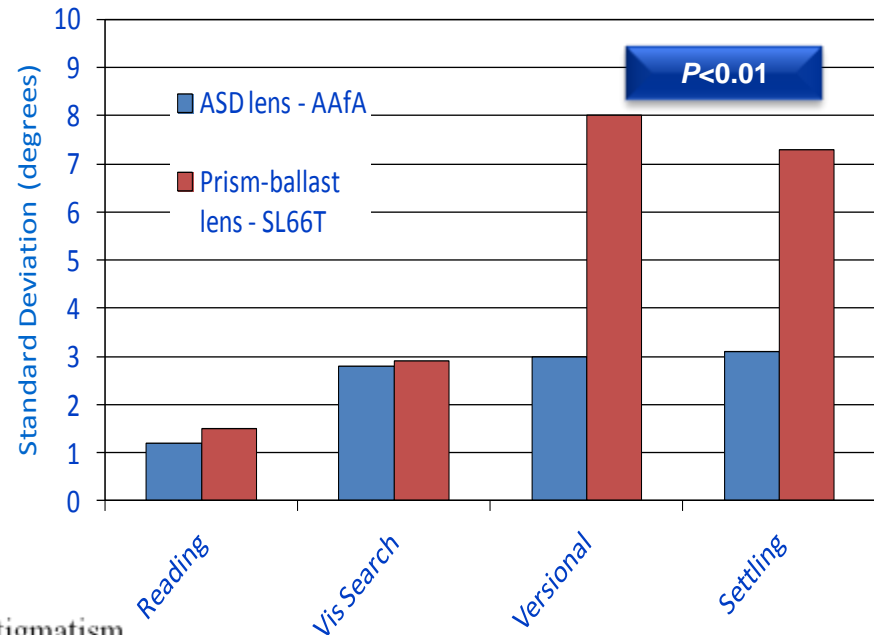
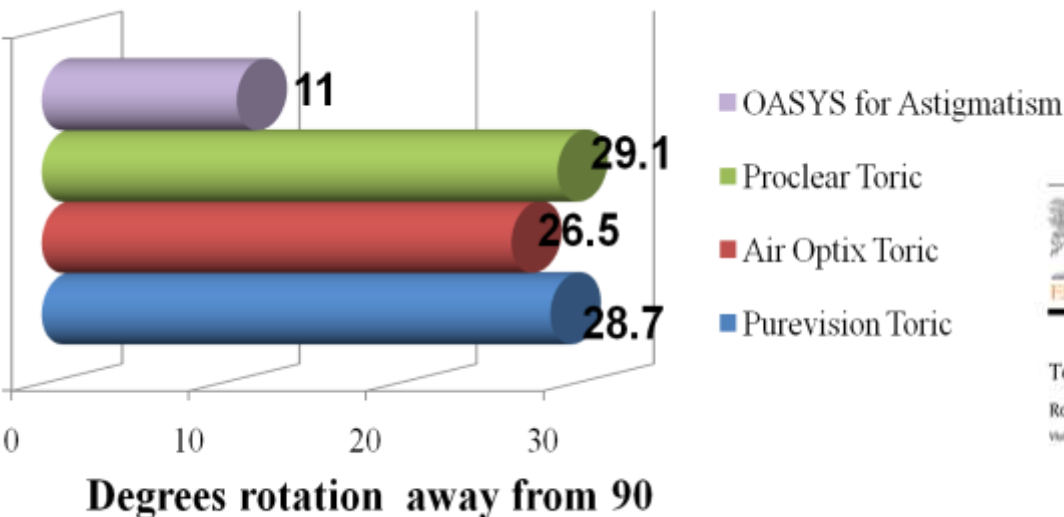
Volucare Research Ltd., Queen House, West Street, Boreham, Surrey GU24 7EN, UK

Research Suggests Stability Varies with Design

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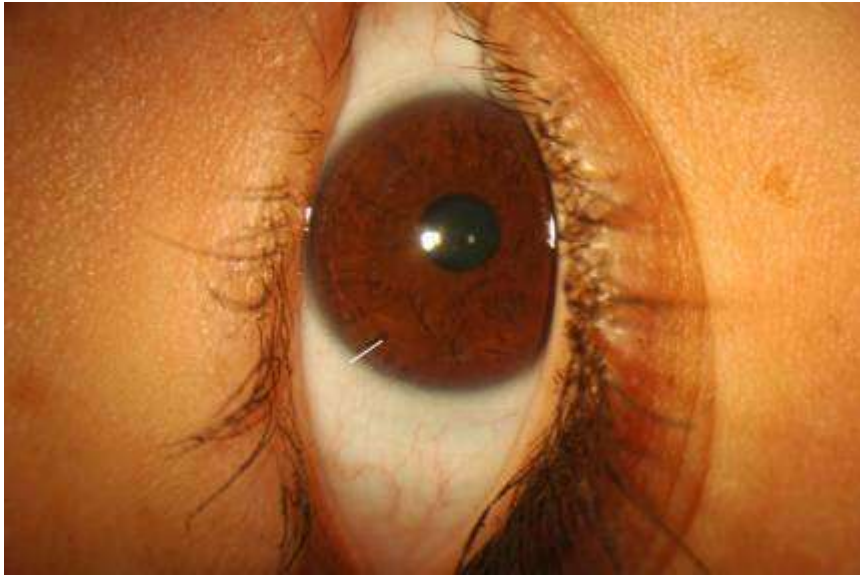


Toric lens orientation and visual acuity in non-standard conditions

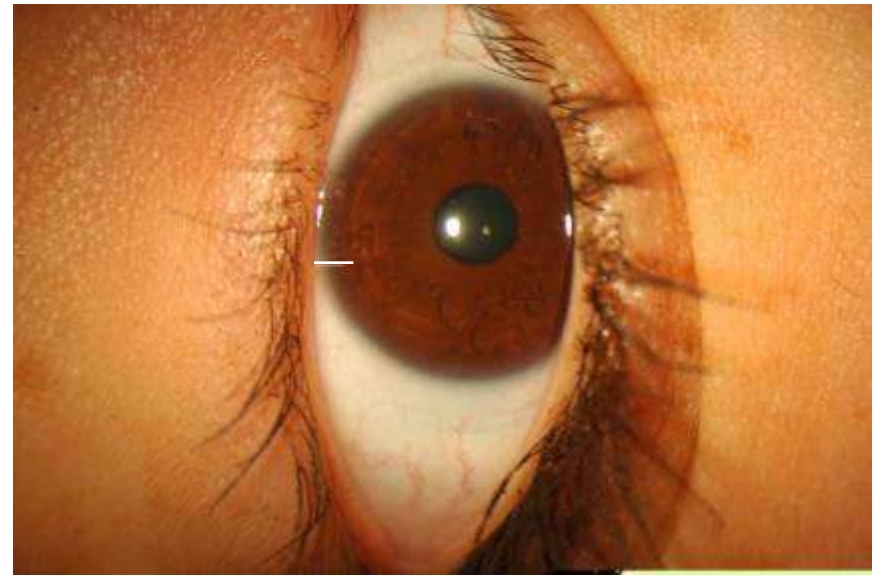
Roberta McIlraith, Graeme Young*, Chris Hunt

Voluntary Research Ltd., Crown House, West Street, Boreham, Essex C09 7EN, UK

The Effect of Gravity



Prism Ballasted Design



Accelerated Stabilisation Design

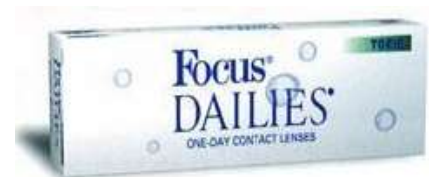
SOME FITTING TIPS

Toric Options

- Have a lens design of choice, but...
- One soft toric lens will not suit all your astigmats
 - alternative stabilisation method
 - different materials
 - replacement frequency to match patient needs
 - disposable/stock and prescription/custom made
- Be familiar with fitting characteristics

Fitting Torics – Never Easier!

- Improved manufacture
 - Reproducibility & optical quality
 - 95% need no compensation
- Enhanced designs:
 - More comfortable
 - Stabilise quickly
 - Maintain stabilisation
 - Irrespective of eye movt. and gravity
- Better materials
- Convenience
- Wider parameter ranges



Lens BVP Selection

Accurate, up to date
refraction



Convert Spec Rx to
Ocular Rx

What is the process?

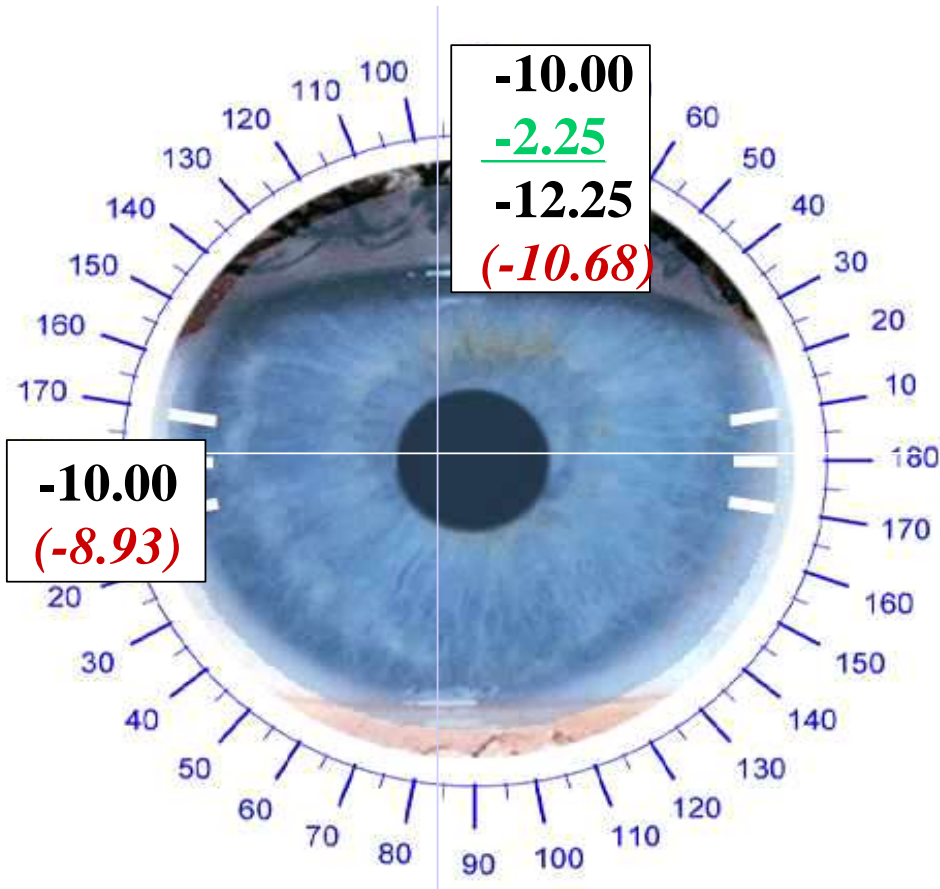


↓cyl if there is choice;
leave axis unchanged



Trial lens cylinder &
axis close to Rx

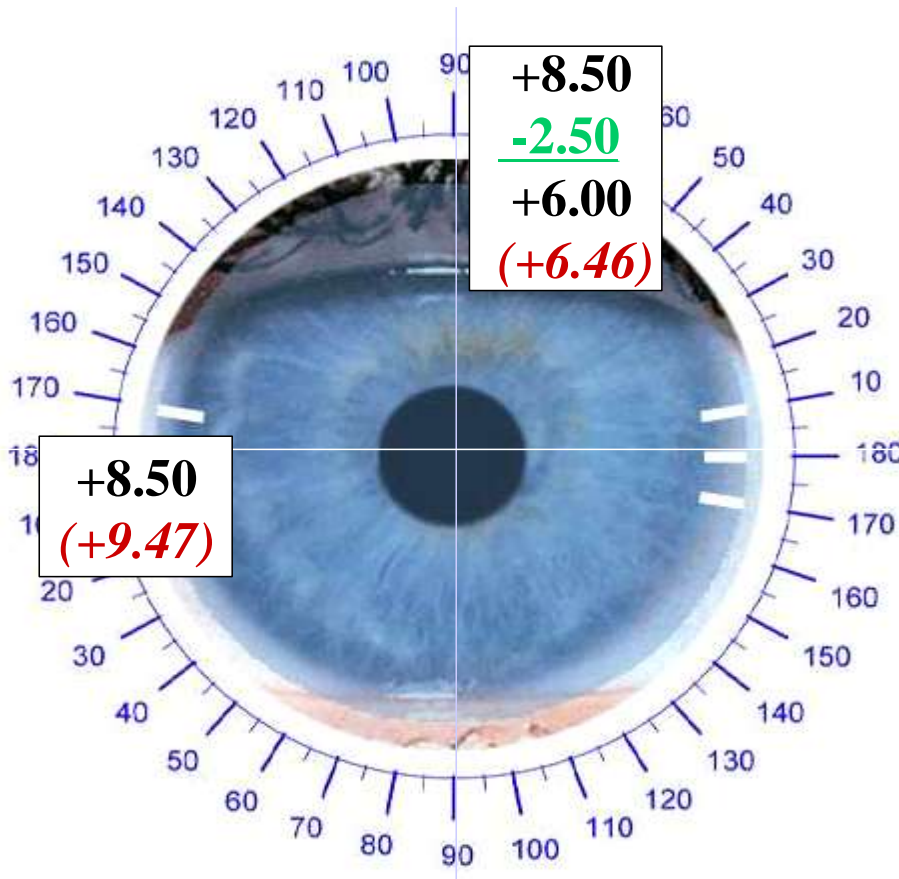
Convert Spec Rx to Ocular Rx



Spectacle Rx
-10.00 -2.25 X 180

Ocular Rx
-9.00 -1.75 X 180

Convert Spec Rx to Ocular Rx



Spectacle Rx

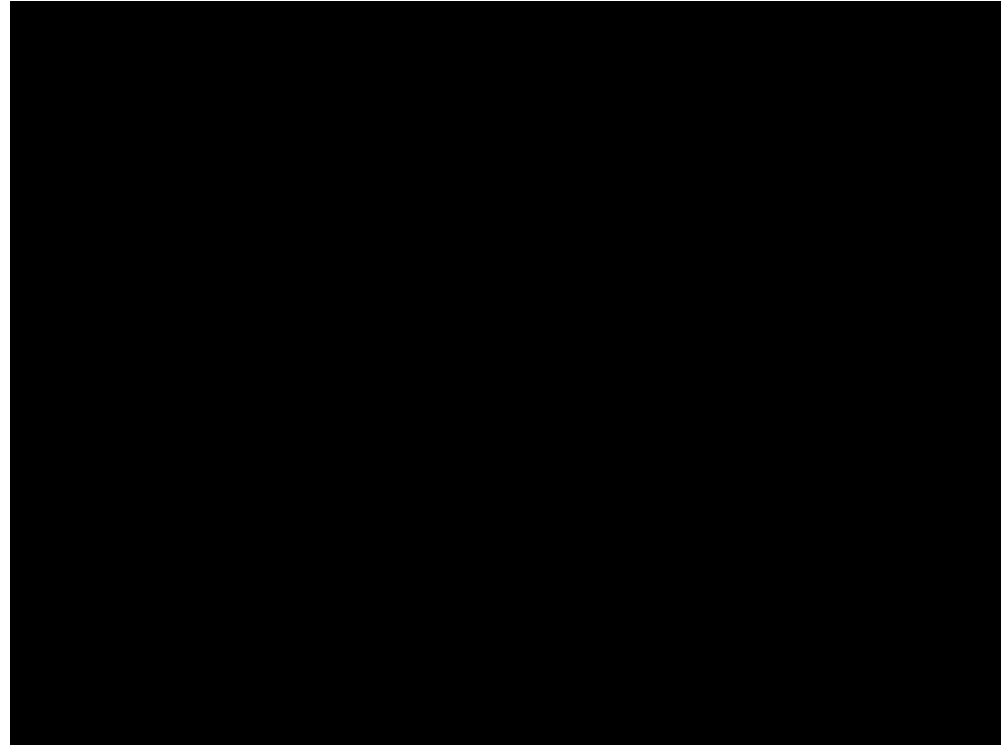
$$+8.50 - 2.50 \times 180$$

Ocular Rx

$$+9.50 - 3.00 \times 180$$

Key Features of a Successful Fit

- Good physical fit
 - Same as spherical lens
 - Loose Vs tight fit
- Stabilisation
 - Speed
- Orientation
 - Quantity & Rotational Stability



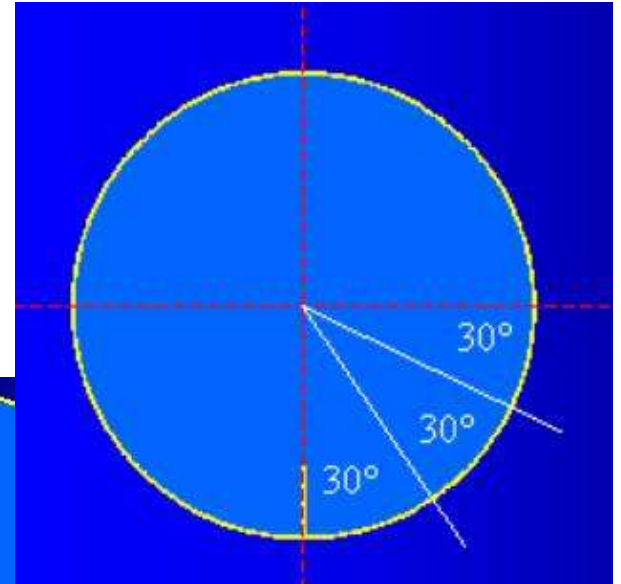
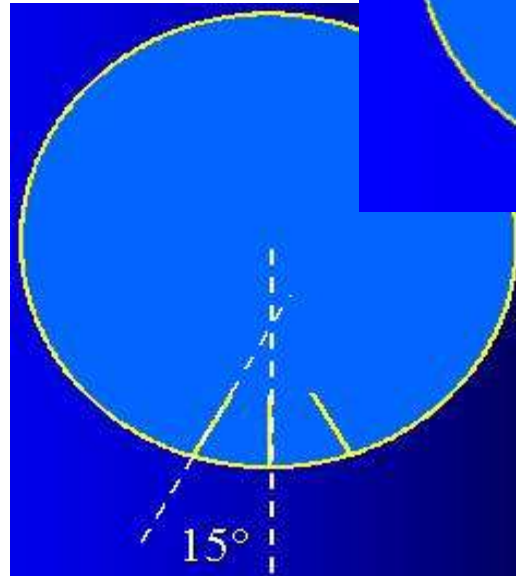
Lens Fitting Simplified

1. Do accurate refraction
2. Compensate for vertex distance
3. Insert lens nearest to refraction – with goal of dispensing
4. Allow to settle
5. Assess for fit and orientation
6. If necessary change lens to allow for rotation
7. Repeat steps 2-5

Quantify the Rotation

There are two different approaches to quantify toric CL rotation:

- Estimate it (1 hour = 30°)
- Measure it

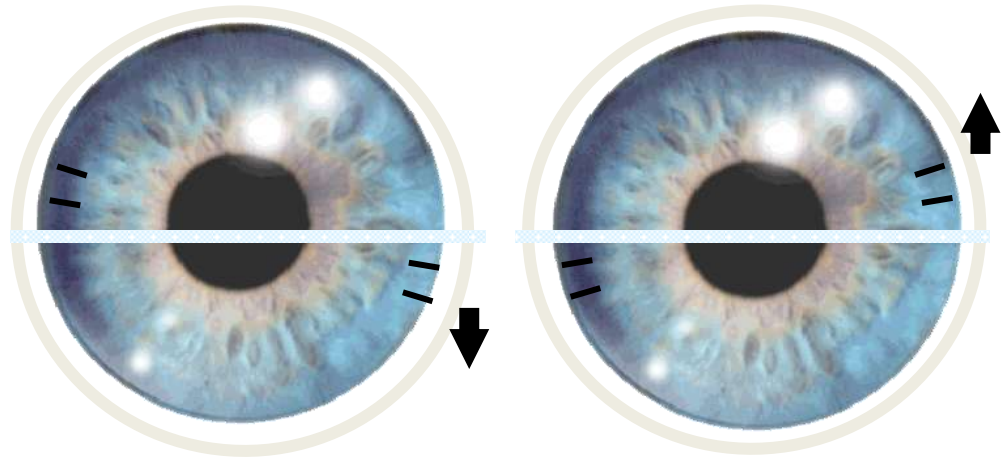


Modify the Axis #1

CAAS: acronym

Clockwise Add

Anti - Clockwise Subtract

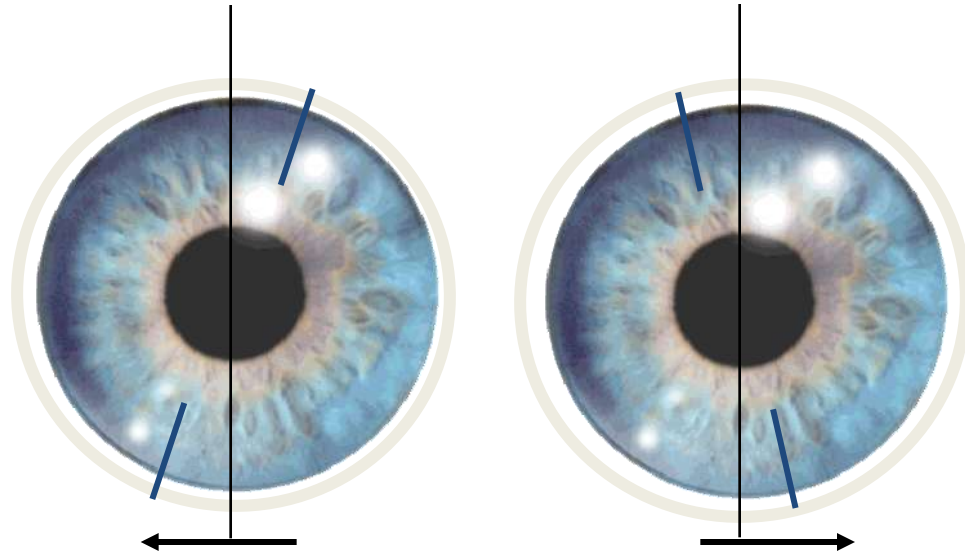


Modify the Axis #2

LARS : acronym

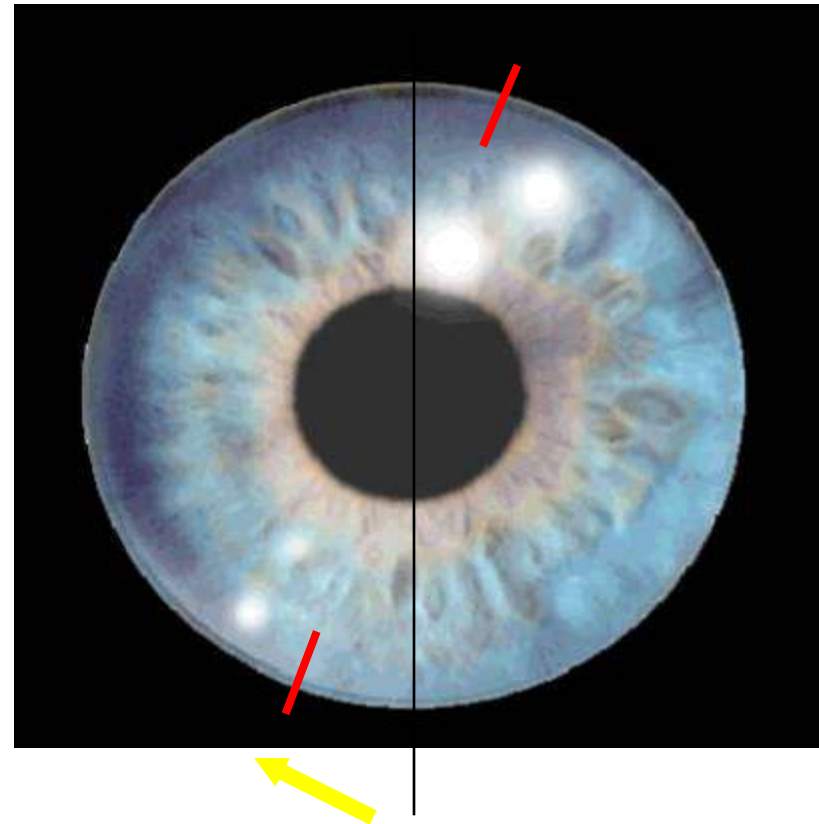
Left Add

Right Subtract



Lens Rotates Clockwise

- Spec Rx: -3.00 / -2.00 x 180
- Lens prescription:
-3.00 / -1.75 x 180
- Rotation is clockwise (Left)
10°

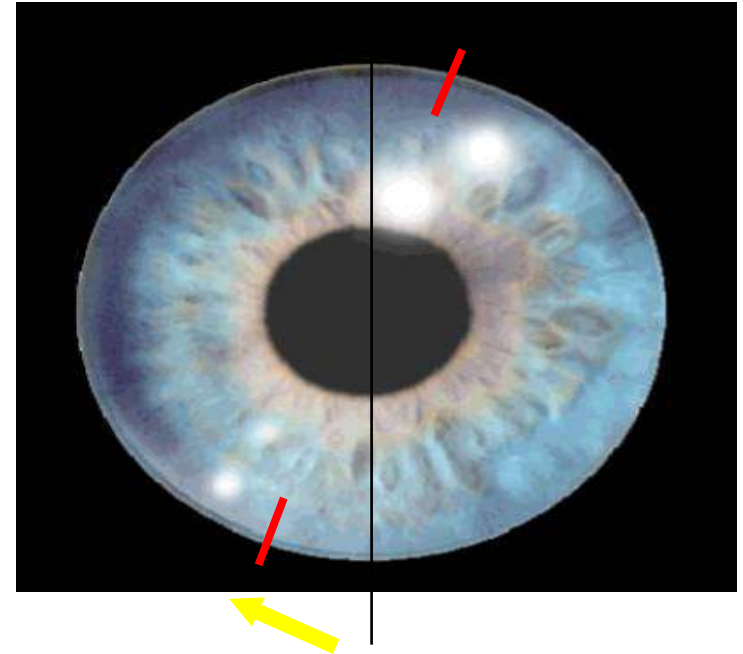


Clockwise Orientation

- Lens prescription:
 $-3.00 / -1.75 \times 180^{\circ}$
- Rotation is clockwise
 10°
- Remove this lens



Insert new prescription:
 $-3.00 -1.75 \times 10^{\circ}$



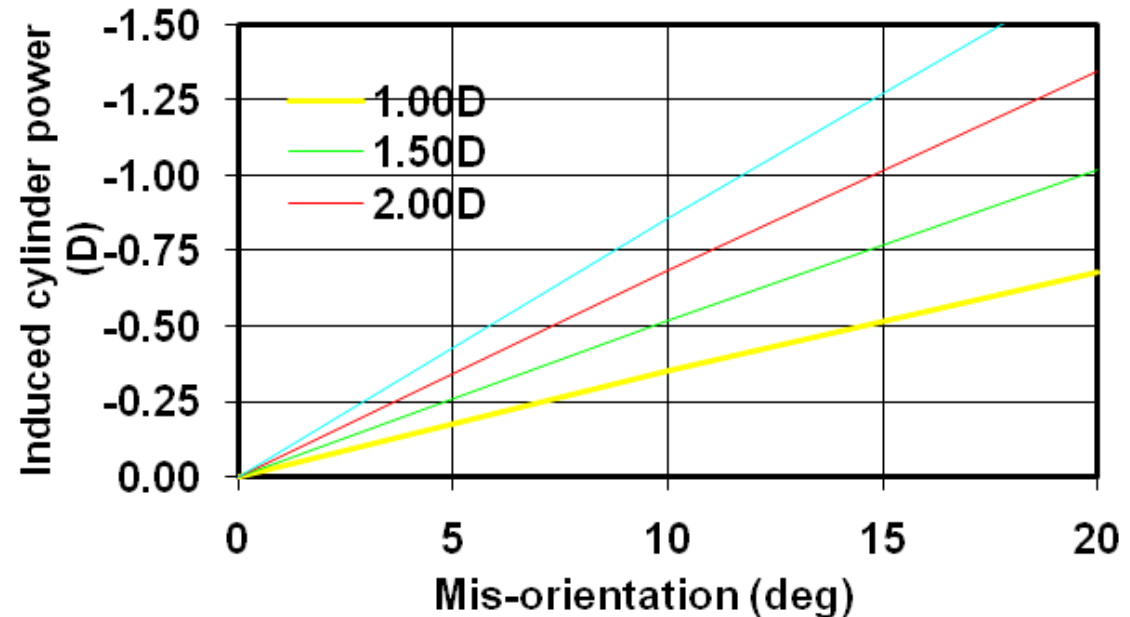
Q. Will the new lens rotate?

A. Yes same as the 1st lens!

Approaches to Explaining Poor Vision

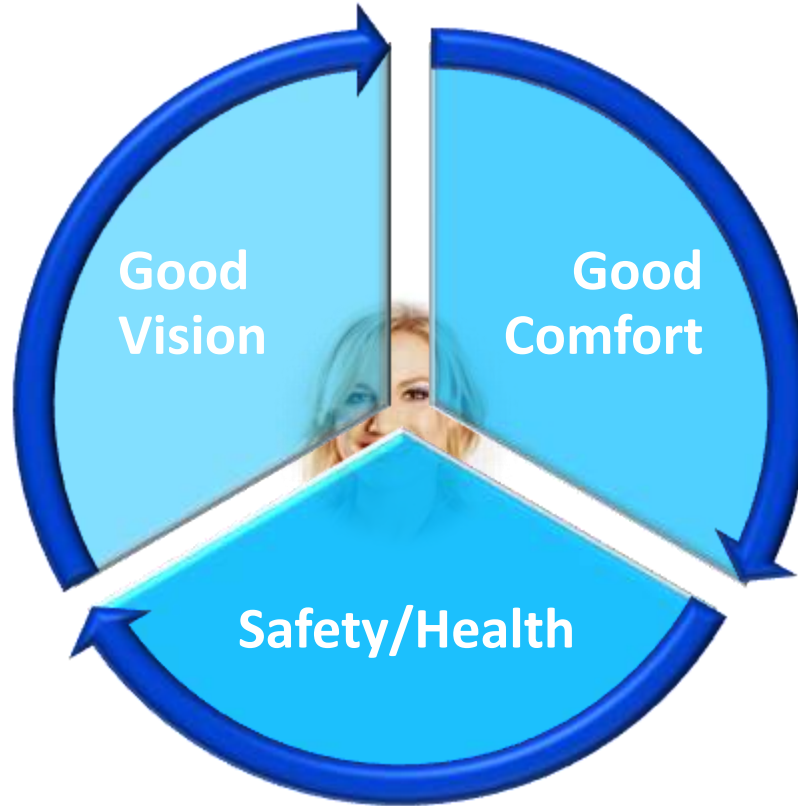
Apply 3 rules:

- Is cyl 2x sphere?
- Is axis direction as expected?
- Is induced cyl power as expected?



SOME CONSIDERATIONS

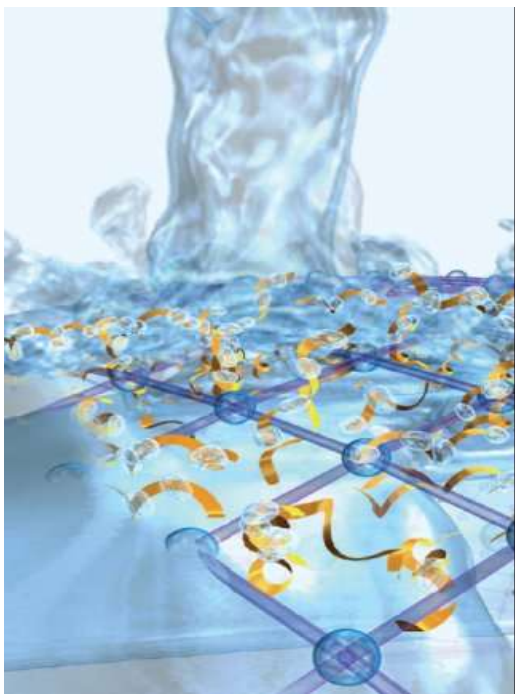
What do Astigmats want?



What do Astigmats want?



Innovation in Comfort #1



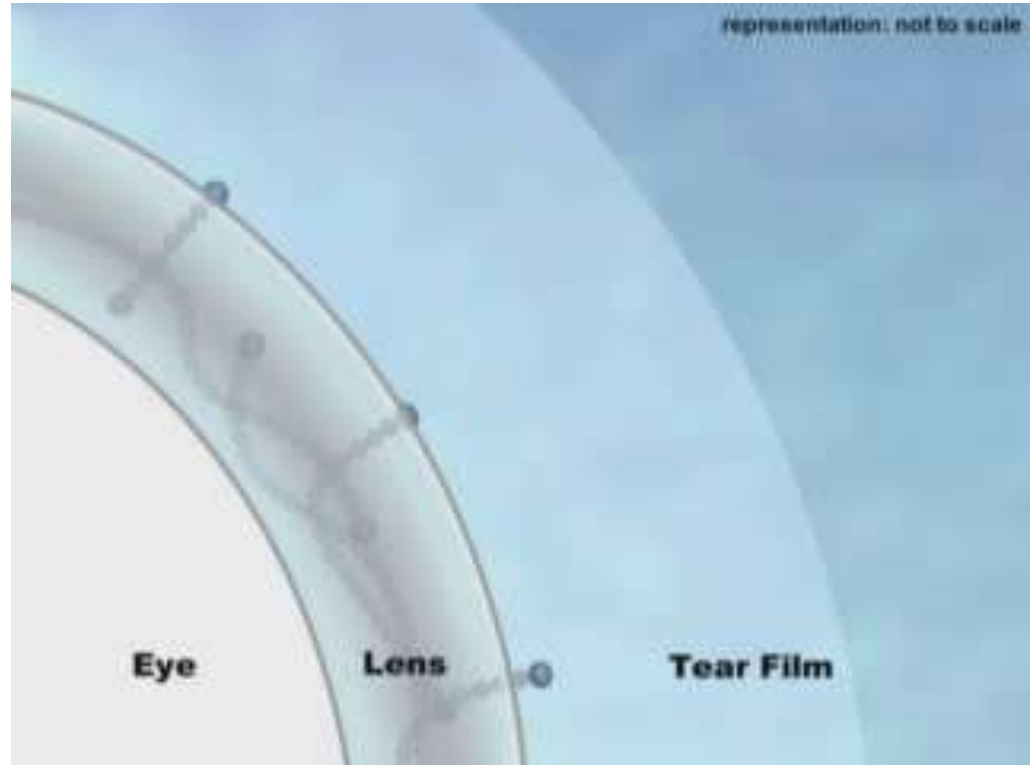
LACREON™



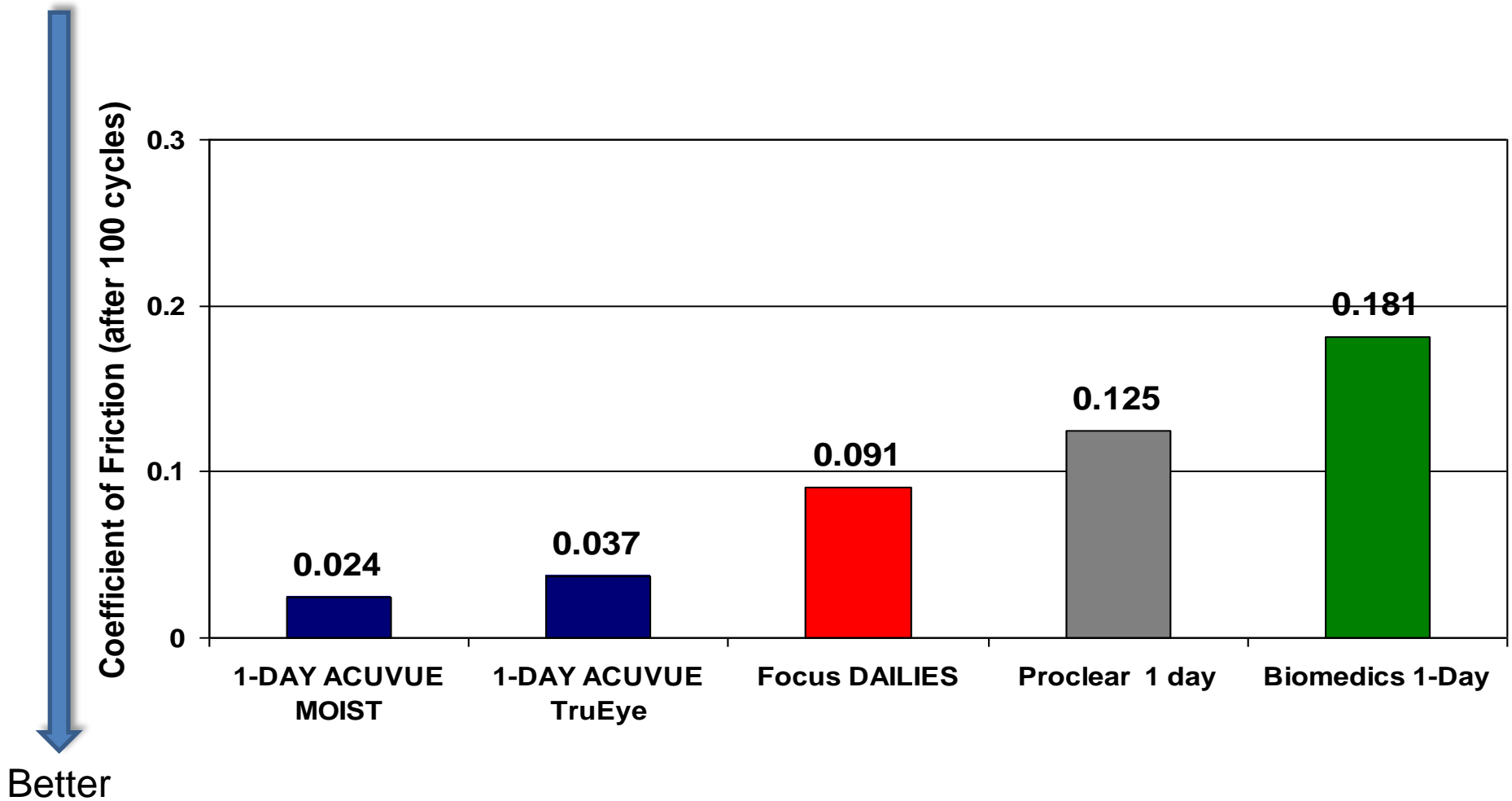
Innovation in Comfort #2



Focus® DAILIES® TORIC with AquaComfort™

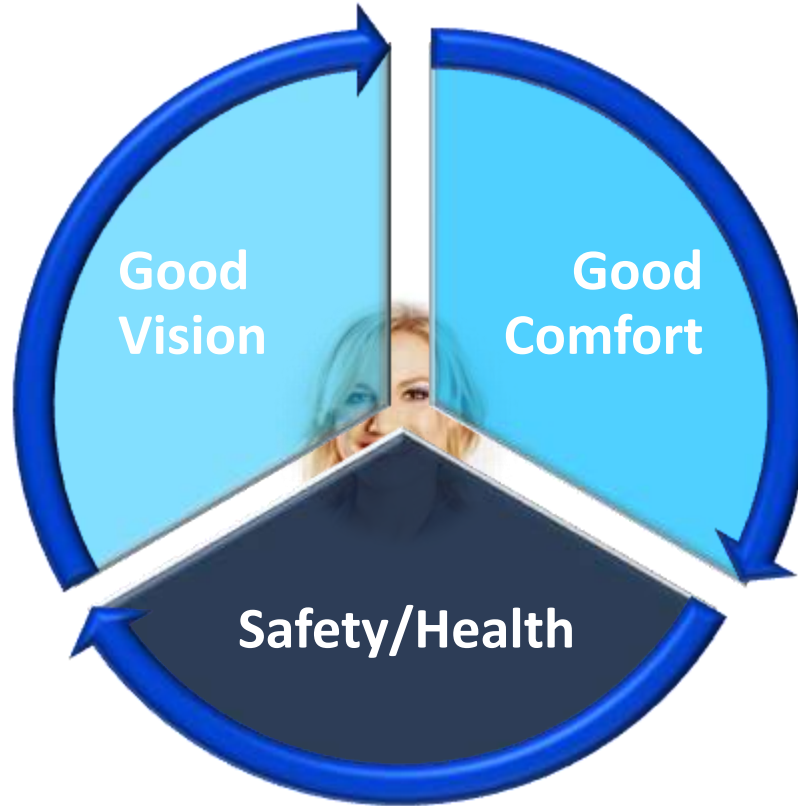


Coefficient of Friction



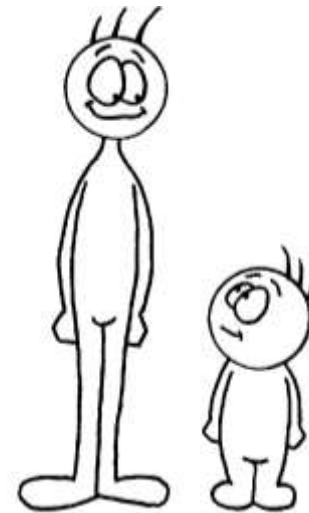
Measurements: SUSOS Switzerland 2009

What do Astigmats want?



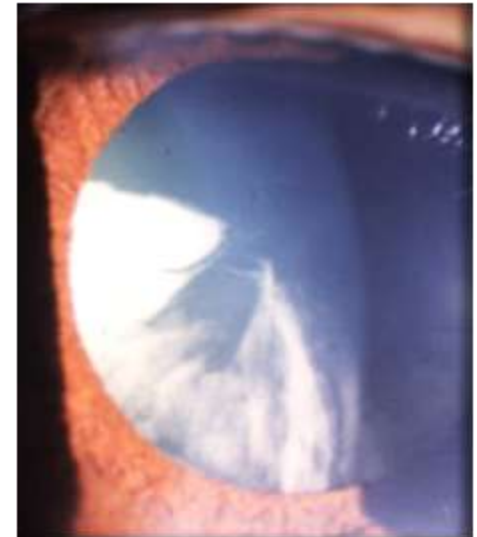
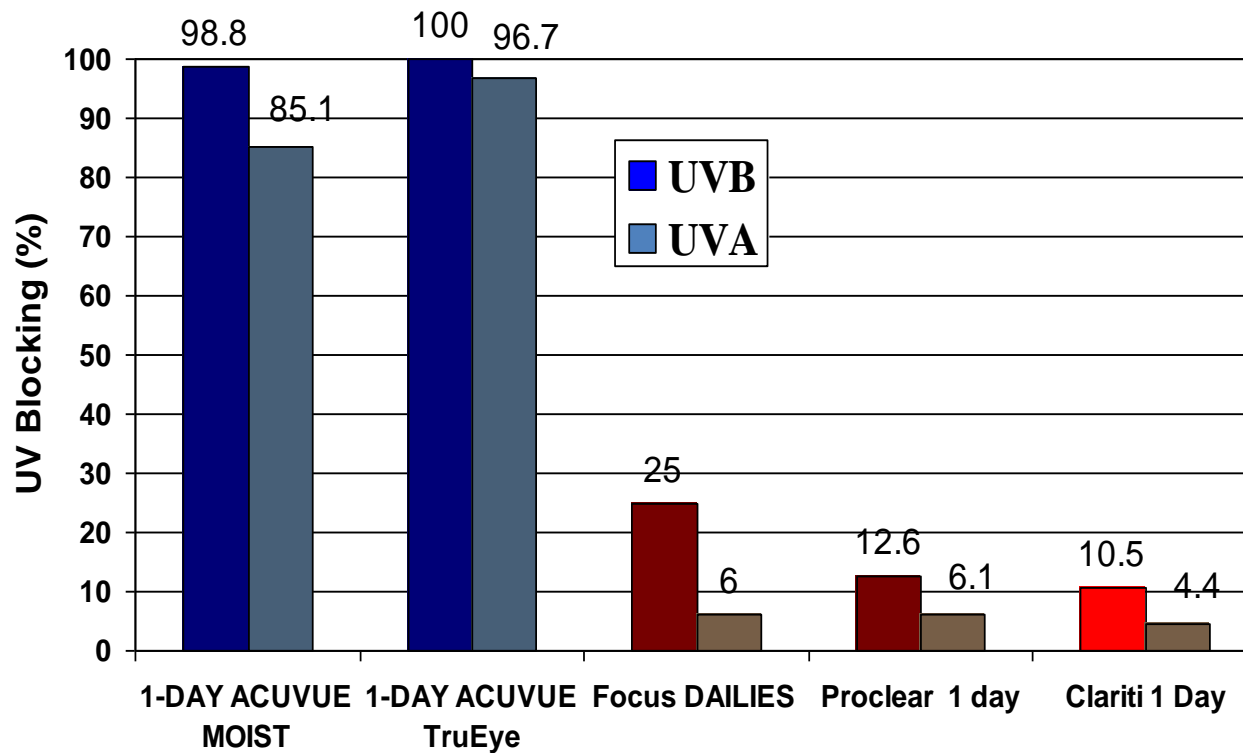
Health Benefits: DDs versus SHs

- Daily disposable modality
 - Lower complications
 - More convenient
 - Wider parameter range now available
 - Better for allergy sufferers
 - Higher costs if worn frequently
- Silicone Hydrogel reusable
 - High oxygen delivery irrespective of brand
 - Wider parameter range
 - Lower costs if regular wear

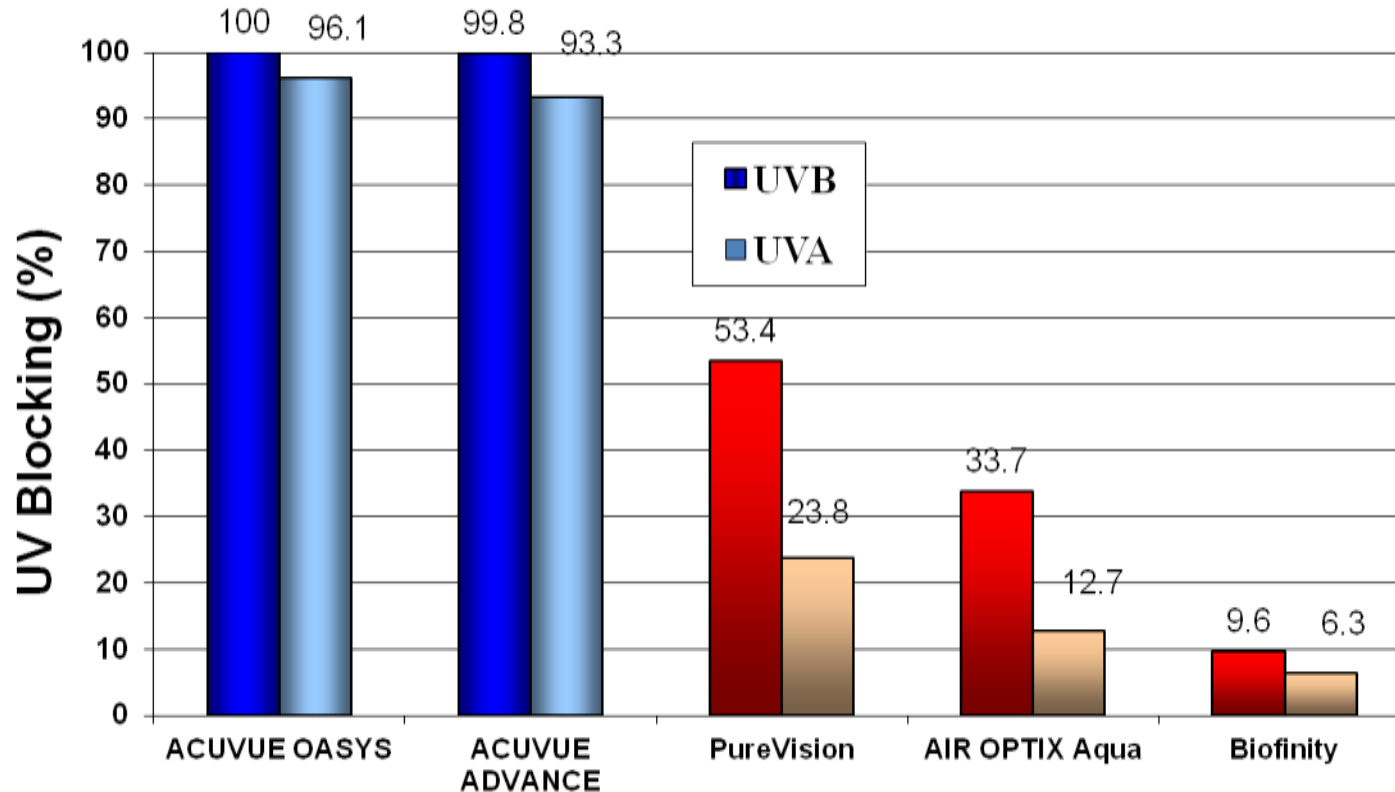


Health Benefits

- Effective UV Blocking



Reusable Lens UV Blocking



When to think Toric

- Any cylinder in either eye ≥ 0.75
 - >45% patients
- Any patient who previously dropped out due to astigmatism
 - Comfort or vision
- Currently ‘masked’ astigmats



No need for Fear



You've Got The Power!



**THANK-
YOU**

