

**On behalf of Vision Expo, we sincerely
thank you for being with us this year.**

Vision Expo Has Gone Green!

We have eliminated all paper session evaluation forms. Please be sure to complete your electronic session evaluations online when you login to request your CE Letter for each course you attended! Your feedback is important to us as our Conference Advisory Board considers content and speakers for future meetings to provide you with the best education possible.



1

Financial Disclosure

Scott Keating has no financial interests to disclose.

2

“Niches”

Dr. Scott Keating, O.D.

3

Course Description

- ▶ In this course, attendees will explore and learn the benefits of using niche contact lenses, and amniotic membranes in specific circumstances. Topics discussed will include preventing vertical prism imbalance with oasis soft toric contact lenses, reducing digital eye fatigue with Biofinity Energys, Tangent Streak Spectra Vue Rigid Gas Permeable multifocals for presbyopia wear, and amniotic membranes for healing of the corneal surface. Using these special contact lenses and membranes will create a successful, healthy, vibrant eyecare business.

4

Upon completion of this course, the attendee should be able to:

- ▶ Understand vertical prism imbalance caused by wearing one sphere and one toric contact lens. How to correct the vertical prism imbalance.
- ▶ Fit rigid gas permeable multifocal contact lenses with confidence
- ▶ Know when to fit uniquely designed contact lenses for digital eye fatigue and pre-emerging presbyopes.
- ▶ Know the benefits of fitting amniotic membranes and how to fit them whether using cryopreserved or dehydrated membranes.

5

Resultant vertical prism in toric soft contact lenses

- ▶ In the monocular astigmats fitted with toric soft contact lenses or those wearing a mix of toric designs vertical prism imbalance could create or exacerbate disturbances in binocular vision function.
- ▶ Contact lens fitters should be aware of this potential effect when selecting which toric soft contact lens design to prescribe. This is particularly important for monocular astigmats with pre-existing binocular anomalies, and when managing complaints of asthenopia in monocular astigmats.

6

Resultant vertical prism in toric soft contact lenses

- ▶ Toric soft lenses require rotational stability for consistent visual acuity. Various methods are used to stabilize rotation, including prism ballast, peri-ballast and thin zone designs.
- ▶ Prism Ballast utilize prism to stabilize the lens.
- ▶ Peri-Ballast designs are similar in concept to prism ballast: the superior portion of the lens is thinned to stabilize the lens rotation.
- ▶ Thin zoned designed (also known as accelerated stabilization design) lenses use thickness of the contact lens and both upper and lower eyelid movement to achieve rotational stability. The minimal contact lens thickness under both lids, helps to have no residual prism in the optic zone.

7

Resultant vertical prism in toric soft contact lenses

- ▶ Prism located in the optical zone of the toric lens may introduce vertical binocular prism imbalance.
- ▶ If the patient is prescribed the prism design in only one eye greater than 0.5 vertical prism design could lead to binocular disturbances, symptoms such as :
 - ▶ Asthenopia, Nausea, Visual Discomfort, Headaches, Motion Sickness, and decreased Stereopsis in some patients

8

Clinical Testing

- ▶ Acuvue Oasys Toric had virtually no base down prism
- ▶ Air Optix Toric - 0.5 base down prism
- ▶ Avaira Toric - 0.75 base down prism
- ▶ Biofinity Toric - 0.77 base down prism
- ▶ Purevision Toric - 1.15 base down prism



9

Clinical Testing

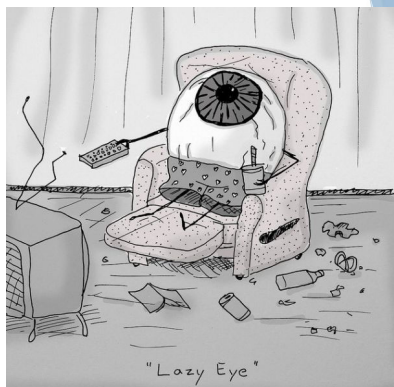
- ▶ In some cases, the vertical base down prism could work in favor of helping vertical imbalance problems (depends on which eye needs base down prism to correct binocular imbalance)

10

Oasys Specification

- ▶ Material - Senofilcon A
- ▶ DK/7 129
- ▶ Blocks UV
- ▶ Parameters:
 - ▶ Power: Plano to -6.00, -6.50, in 0.25 steps to -9.00 in 0.50 steps
 - ▶ +0.25 to +6.00 in 0.75 steps
 - ▶ Cyl: 0.75, -1.25, -1.75, -2.25, -2.75
 - ▶ Axis: 10 degrees - 180 degrees in 10 degree steps

11



12

Digital Eye Fatigue

- ▶ Digital eye fatigue, the ocular discomfort felt after 2 or more hours in front of a digital screen is characterized by tiredness, headache and redness.
 - ▶ 9 of 10 adults with digital eye fatigue use digital devices more than 2 hours per day
 - ▶ More than a third of millennials spend 9 or more hours a day on digital devices
 - ▶ 68% of millennials report symptoms of digital strain

13

Digital Eye Fatigue

- ▶ Do we ask our patients about digital device use?
 - ▶ 90% of patients do not talk with their eye care professionals about digital device usage.

14

Digital Eye Fatigue

- ▶ Cooper Biofinity Energys lenses use digital zone optics lens design to help with tiredness associated with digital eye fatigue.
 - ▶ Multiple front - surface aspheric curves are employed across the entire optical zone
 - ▶ These curves distribute powers evenly to stimulate more positive power in the center of the lens. This design helps ease accumulative burden without impacting distance vision. Therefore, Biofinity Energys lenses fit like a single vision lenses



15

Digital Eye Fatigue

16

Digital Eye Fatigue

- ▶ Biofinity Energys use Aquaform technology for natural moisture and breathability. Less Silicone is needed, thereby making the lens soft and flexible to enhance comfort and fitting versatility.

17

Biofinity Energy Specification

- ▶ DK/7 160
- ▶ Power: +8.00 to -12.00(0.5D after +/-6.00D)
- ▶ Daily or up to 6 nights extended wear, monthly replacement
- ▶ This lens is a great niche for emerging presbyopics and anybody who uses digital devices

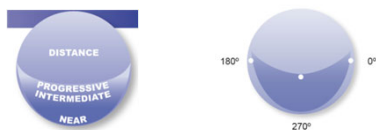
18

Spectra Vue-Translating Progressive Multifocal

- ▶ Spectra Vue by Tangent Streak provides distance vision through a spherical power upper segment and near vision through spherical power segment.
- ▶ Progressive intermediate vision is provided by the crescent shaped middle segment.
- ▶ Spectra Vue is a Rigid gas permeable contact lens available in many materials.

19

Spectra Vue-Translating Progressive Multifocal



SPECTRA VUE[®]
By Tangent Streak[®]

20

Spectra Vue-Translating Progressive Multifocal

- ▶ Ideal Lens to Cornea Fit
 - ▶ Centered laterally and riding at the lower lid
 - ▶ Center low point (CLP) of the intermediate seg positions at, or approximately ¼ into the inferior pupil on distance gaze, in normal lighting
 - ▶ Rotation should be no more than 20 degrees nasal, or 15 degrees temporal
 - ▶ Fluorescein pattern shows slight superior-central touch and moderate inferior pooling.
 - ▶ Moderate Edge lift, feathered and broken peripheral band approximately 0.5mm wide

21

Positioning and Movement Adjustments

- ▶ Decenters Laterally
 - ▶ Increase OAD by 0.5mm or steepen BC by 0.50D
- ▶ Drops too fast, too slow, or hangs up
 - ▶ Evaluate fluorescein pattern: flatten or steepen BC by 0.5D
 - ▶ Pull away upper lid:
 - ▶ If lens drops too quickly, it is too flat; steepen BC by 0.50D
 - ▶ If lens fails to drop, its too tight; flatten BC by 0.50D
 - ▶ If lens still drops slowly, add 0.37D of prism

22

Edge Lift Adjustment

- ▶ Pop-offs and/or edge awareness discomfort - steepen edge lift or base curve
- ▶ Slow drop and/or corneal irritation - flatten edge lift or base curve

23

Vision Adjustment

Initial Fitting Suggestions

.Cornea OAD	.HVID	.Vertical Fissure	.Recommended
.Average	.11.4 to 12.1	.9.0 to 11.0	.9.5 or 10.00mm
.Larger	.12.2 & up	.Wide	.10.5 or 11.0mm
.Smaller	.Under 11.4	.Narrow	.9.0 or 9.5mm

24

Vision Adjustment

Base Curve Selection
Trial Lens Diameter

Corneal CYL	.9.0mm	.9.5mm	.10.0mm	.10.5mm	.11.0mm
.0-0.785D	.On K	.0.25 Flat	.0.50D Flat	.0.50-0.75D Flat	.0.75D Flat
.1-.00-1.50D	.0.50D Steep	.0.25D Steep	.On K	.0.25D Flat	.0.50D Flat
.1.75-2.25D	.0.75D Steep	.0.50D Steep	.0.37D Steep	.0.25D Steep	.On K

25

Lens Power Selection

Distance	Distance Rx •Vertexed Spectacle Rx with Standard BC to flat K calculation
Intermediate	Intermediate Rx •Recommended is 40-50% of the spectacle Rx near ADD power
Near	Near Add Rx •Spectacle Rx Near ADD up to +4.50

26

Lens Power Selection

- ▶ Distance Vision
 - ▶ Verify distance Rx - over refract
 - ▶ Lower seg height
 - ▶ Adjust prism axis for rotation
- ▶ Intermediate or Near Vision
 - ▶ Verify Near Rx - over refract
 - ▶ Raise seg height
 - ▶ Adjust prism axis for rotation

27

Lens Power Selection

- ▶ In my clinical experience, this is the best rigid multifocal I have ever fit.
- ▶ The vision is very crisp compared to other rigid multifocal brands.
- ▶ There is a no risk warranty which includes the first two lenses per eye and a 90 day cancellation option.
- ▶ Tangent Streak has very knowledgeable consultants who make the fitting extremely easy.

28



29

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ What is Amnion?
 - ▶ Amnion is the placental tissue that surrounds and protects the fetus during development in utero. The properties of Amnion that benefit the fetus also make it an effective material for providing healing of the corneal surface.
 - ▶ Amnion consists of fibrillar and membranous collagens, elastin, and a mix of growth factors and cytokines.
 - ▶ Clinical and surgical use of amnion tissue help with anti-inflammatory, anti-scarring, and contains growth factors that promote epithelial wound healing and promote limbal stem-cell proliferation on the surface of the eye.

30

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ What are the indications for amniotic membranes?
 - ▶ Chemical burns of the ocular surface
 - ▶ Corneal epithelial defects, such as :
 - ▶ Bullous or band keratopathy
 - ▶ Epithelial basement membrane
 - ▶ Keratitis (neurotic, filamentary, bacterial or viral)
 - ▶ Post-operative corneal produces
 - ▶ Post-operative pterygium surgery
 - ▶ Corneal ulcers
 - ▶ Stevens-Johnson syndrome
 - ▶ Dry Eye Treatment

31

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ Two Types of Amniotic Membranes
 - ▶ Cryopreserved
 - ▶ Dehydrated

32

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ Cryopreserved involves a slow freezing process
 - ▶ Prokera from Bio Tissue is one example
 - ▶ The tissue is secured around a polycarbonate ring. It is inserted into the eye in a similar manner to a contact lens. It is a class 2 medical device.

33

A Simply Remarkable Tissue - Amniotic Membranes

▶ Prokera Insertion

- ▶ Remove package from freezer and allow to come to room temperature(5 minutes)
- ▶ Open pouch and carefully drain preservation fluid from package
- ▶ Rinse the ring/membrane with sterile saline to remove glycerin
- ▶ Place topical proparacaine on the ocular surface
- ▶ Insert ring edge under upper eyelid while patient looks down, then have patient look up as you put in ferron ring onto the eye
- ▶ Stroma side should be in contact with the eye surface
- ▶ Remove ring in 5-10 days



34

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ Dehydrated membranes are secured by using a vacuum with low temperature heat
- ▶ The Eclipse by Ophthalmix is a good example of a dehydrated membrane.

35

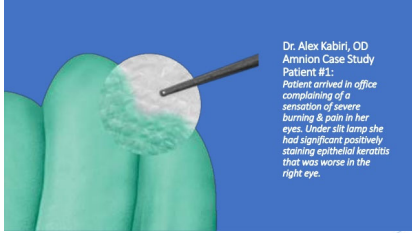
A Simply Remarkable Tissue - Amniotic Membranes

▶ Eclipse Insertion

- ▶ Anesthetic drops
- ▶ Dry surface with cell sponge - graft will adhere better
- ▶ Open pouch, use smooth tip forceps to remove
- ▶ Place graft on central corneal surface
- ▶ Smooth the graft on the surface with sponge or smooth forceps
- ▶ Patch with contact bandage (Air Optix Night and Day Lens)
- ▶ Sit with both eyes shut for 10 minutes

36

A Simply Remarkable Tissue - Amniotic Membranes



37

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ Remove contact lens bandage in 3-5 days, membranes naturally will dissolve in 3-5 days.
- ▶ Always use dual layer amniotic disc Eclipse (Epithelium is on both sides)

38

A Simply Remarkable Tissue - Amniotic Membranes

- ▶ Eclipse has the following advantage
 - ▶ Store dry at room temperature
 - ▶ Hydrates rapidly
 - ▶ Adheres to the ocular surface
 - ▶ Three year shelf life
 - ▶ Easy to handle a placement
 - ▶ Dual graft allows either side to be placed in contact with ocular surface
 - ▶ Cost efficient

39

A Simply Remarkable Tissue -
Amniotic Membranes

- ▶ Prokera Advantages
 - ▶ Cryotekmethod preserves the heavy chain hyaluronic acid
 - ▶ Pentraxin 3 which promotes stem cell proliferation and regeneration

40

Question & Answer
Dr. Scott Keating, O.D.

41
