



# Contact Lens Fitting for Myopia Management

Dr. Julie DeKinder

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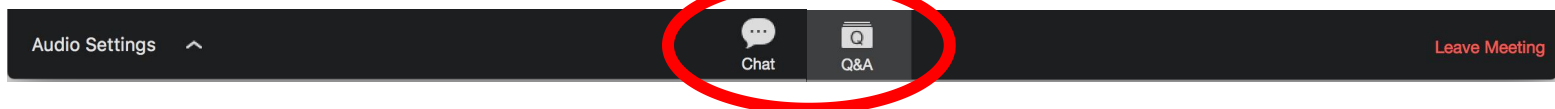
## WELCOME!

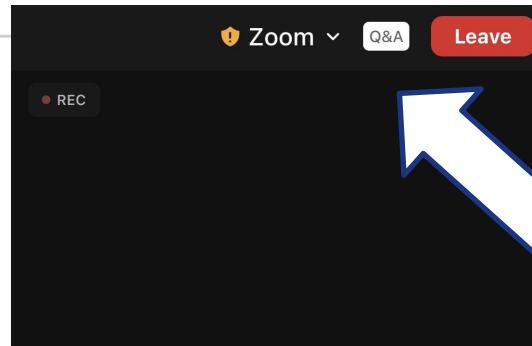


Host: Dr. Ariel Cerenzie

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### Opportunity to Partner

Optometrists are at the frontline to recommend treatment for cataract and glaucoma patients.



#### Established relationships with patients

- › Ability to inform patients of the best technologies available
- › Needs, wants, expectations, and lifestyle



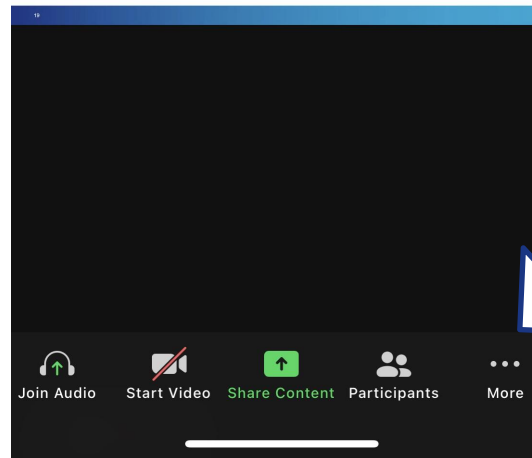
#### Reduce patient and physician burden

- › Cospharmacy visits and prior authorizations
- › Ocular surface disease and potential effects on visual acuity



#### Ability to impact patients' post-operative lifestyle

- › ONE TIME opportunity during cataract surgery to address a patient's cataract, refractive needs (astigmatism and presbyopia) as well as their glaucoma



## Speaker Bio –

Dr. Julie DeKinder is a Clinical Professor at University of Missouri Saint Louis College of Optometry, where she also serves as Associate Dean of Academic Programs and Director of Residency Programs. Dr. DeKinder is both a fellow of the American Academy of Optometry and a Diplomate in Cornea, Contact Lens and Refractive Technologies. She is a fellow of the Scleral Lens Education Society, and a member of the American Optometric Association and the Missouri Optometric Association. She is currently serving as Immediate Past Chair for the Association of Optometric Contact Lens Educators (AOCLE) and Vice Chair of the Accreditation Council on Optometric Education (ACOE). She serves on committees for the AAO, ACOE, and ASCO.



# Financial Disclosures



- Nothing to Disclose



**All financial relationships  
have been mitigated.**





# CONTACT LENS FITTING FOR MYOPIA MANAGEMENT

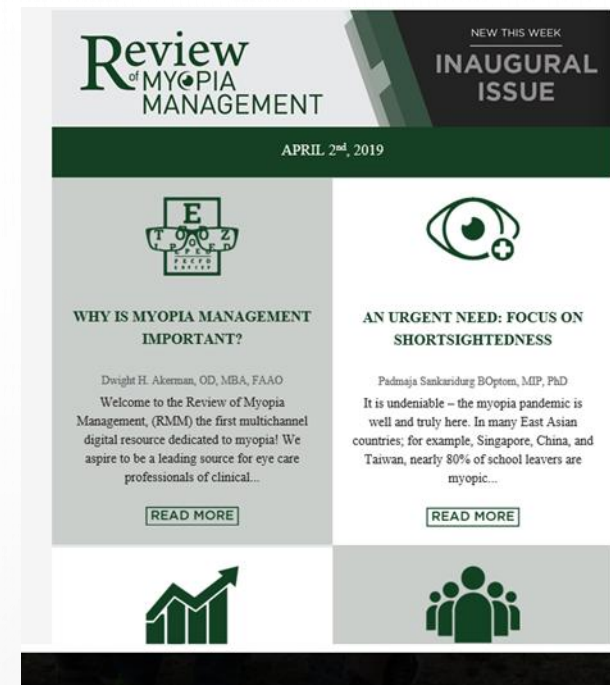
JULIE DEKINDER, O.D. FAAO, FSLs

DIPLOMATE, CCLRT

CLINICAL PROFESSOR

# OVERVIEW

- CL FITTING AND CHILDREN
- SAFETY OF CL WEAR W/ CHILDREN
- ORTHOKERATOLOGY
- SOFT MULTIFOCALS



# Fitting Kids in Contact Lenses

## ACHIEVE

*the adolescent and child health initiative to encourage vision empowerment study*

Contact Lenses significantly improve how children feel about:

- *their physical appearance*
- *their ability to play sports*
- *their acceptance among friends*



# Fitting Kids in Contact Lenses

- Studies indicate children as young as 8 are capable to wear CL (soft, GP, and OK)
- CLIP study
  - total chair time only 15 minutes longer
  - 8 to 12 yo vs 13 to 18 yo

Mature enough to independently care for their lenses

# FITTING KIDS IN CONTACT LENSES

## Important factors for successful fitting:

- *Interest and Motivation*
- *Maturity ability to independently take care of CL*
- *Personal hygiene habits*
- *Sports*
- *Prescription requirements*
- *Self-esteem*
- *Pre-existing medical conditions*



# SAFETY CONCERNS

2016

REVIEW ARTICLE

OPEN

## The Safety of Orthokeratology—A Systematic Review

Yue M. Liu, OD, Ph.D., MPH and Peiyang Xie, MD, Ph.D.

**Objective:** The aim of this review is to evaluate the ocular safety of orthokeratology (OrthoK) treatment of myopia correction and retardation.  
**Data Sources:** Clinical studies published in English and Chinese were identified from MEDLINE, EMBASE, CNKI, CQVIP, and WANFANG DATA (all from 1980 to April 2015). The reference lists of the studies and the Science Citation Index were also searched.  
**Selection Criteria:** Relevant clinical studies including case series, case reports, patient/practitioner surveys, retrospective and prospective cohort

studies, and meta-analyses were included. The unique reverse geometry design significantly improves the

*“There is sufficient evidence to suggest that OrthoK is a safe option for myopia correction and retardation. Long-term success of OrthoK treatment requires a combination of proper lens fitting, rigorous compliance to lens care regimen, good adherence to routine follow-ups, and timely treatment of complications.”*

Liu and Xie, [Eye Contact Lens](#). 2016 Jan; 42(1): 35–42

The safety of orthokeratology in myopic children and analysis of related factors

Peike Hu, Yingying Zhao, Duya Chen, Hailong Ni\*

The Second Affiliated Hospital, Zhejiang University School of Medicine, Eye Center, Hangzhou, Zhejiang, China

2021



### ARTICLE INFO

**Keywords:**  
orthokeratology  
adverse event  
myopia  
allergic conjunctivitis

### ABSTRACT

**Objective:** To evaluate the safety of overnight orthokeratology (OK) wear and explore whether factors such as age, refraction and allergic conjunctivitis (AC) history were associated with corneal adverse events (AEs) incidence.  
**Methods:** Medical records of consecutive patients who started OK for myopia correction and continued for more than one year were retrospectively reviewed. Clinical data including sex, baseline age, spherical equivalent refraction (SER), and related medical histories were retrieved. A total of 489 eyes from 260 patients (age: 8–15 years; SER: -1.00 to -6.00 D) were included. Corneal adverse events were the primary outcome. The generalized estimating equations model was used to evaluate the effects of sex, age, SER, and allergic conjunctivitis history on corneal AE incidence over the one-year period.  
**Results:** A total of 111 eyes (22.7%) had corneal AE during the one-year follow-up (corneal staining [n = 106], corneal infiltration [n = 5]) and the incidence of significant AE was 6.9%. The corneal AE incidence was associated with age (OR = 0.874, 95%CI = 0.781–0.978, p = 0.019); SER (OR = 0.632, 95%CI = 0.531–0.754, p < 0.001); and AC (OR = 1.706, 95%CI = 1.017–2.860, p = 0.043). High refraction was the key risk factor for significant AE (OR = 0.542, 95%CI = 0.401–0.732, p < 0.001).  
**Conclusions:** Orthokeratology is a safe option for children with myopia. Younger age, higher myopia, and AC were risk factors for corneal AE in OK wearers. Whereas, only higher myopia was a risk factor for significant AE.

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Hu, Zhao, et al. *Contact Lens and Anterior Eye* 44 (2021) 89–93

# SAFETY CONCERNS

## Healthy Corneal Reshaping Gas Permeable Contact Lens Habits

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Congratulations on your new corneal reshaping GP contact lenses!

To ensure continued success with your reshaping contact lenses, review these healthy contact lens habits.

1. Wash your hands thoroughly with soap, rinse and dry them before handling your contact lenses.<sup>1,2</sup>
2. Do not use tap water to clean, handle or store your contact lenses or to clean the contact lens case.<sup>3,4</sup>
3. Your care regimen has been prescribed specifically for your contact lens type. Do not change your regimen without consulting your eye care provider.<sup>1</sup> Using improper contact lens care products may impact the quality of your contact lenses, your eye health or overall contact lens wearing experience.

Storage, disinfecting, cleaning solution(s): \_\_\_\_\_

Daily Cleaner (if recommended): \_\_\_\_\_

Additional Cleaner (if recommended):  
Every \_\_\_\_\_ weeks

Rewetting drops: \_\_\_\_\_

4. Generic "store brand" solutions are often formulations of older solutions and may not be compatible with your type of contact lenses.
5. To maintain comfortable lens wear, rub and rinse your contact lenses in the palm of your hand with the prescribed solution to remove debris, as directed.<sup>5-11</sup>
6. Always recap your solution bottle.<sup>2,12</sup>
7. Proper care of your contact lens case
  - a. Completely empty the solution in the contact lens case every day.
  - b. Clean the contact lens case and any accessories with your prescribed solution.



- c. Completely wipe dry your contact lens case<sup>13</sup>, leave the case uncapped and place your contact lens case upside down on a clean surface.<sup>13</sup>
- d. Replace your contact lens case and accessories periodically as recommended by your doctor.<sup>1,4-14</sup>

Replacement frequency for cases and accessories: \_\_\_\_\_

Cleaner for contact lens case: \_\_\_\_\_

8. Never add more solution to the left over solution in the case; no "topping off."<sup>10,12,18</sup>
9. You should store a spare pair of contact lenses dry in a contact lens case until needed. Then prior to use, clean the contact lens(es) and soak in disinfecting solution per manufacturers recommendation prior to application.
10. Be sure that your contact lenses are freely moving on your eye before removing them. You can place a rewetting drop in each eye prior to contact lens removal.
11. Discontinue contact lens wear immediately if you experience redness, discomfort, or visual disturbance and call your eye care professional.
12. It is important to follow your doctor's instructions on the wear and care of your contact lens. As with any contact lens wear, there is an inherent risk for contact lens complications.<sup>19-21</sup>
13. ALWAYS bring your contact lenses to every follow up visit.
14. Your follow up schedule is the following:  
 1-day  1-week  1-month  3-months  6-months  
 \_\_\_\_\_

[Healthy Corneal Reshaping Lens Habit | AOCLE - Association of Optometric Contact Lens Educators](#)

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# MYOPIA

## WHEN INITIATE MYOPIA MANAGEMENT?

- RISK FACTORS FOR MYOPIA DEVELOPMENT
  - PARENTAL MYOPIA
  - EXCESSIVE NEAR WORK AT CLOSE DISTANCES
  - REDUCED TIME OUTDOORS
  - ETHNICITY WITH EAST ASIAN CHILDREN AT GREATER RISK
  - LESS THAN AGE-EXPECTED HYPEROPIA
  - FEMALE GENDER



Initiate treatment when myopia is first diagnosed with cycloplegic spherical equivalent refraction of  $-0.50D$



# MYOPIA

- WHEN INITIATE MYOPIA MANAGEMENT?
  - INITIATE TREATMENT WHEN MYOPIA IS FIRST DIAGNOSED WITH CYCLOPLEGIC SPHERICAL EQUIVALENT REFRACTION OF  $-0.50D$

# MYOPIA

- COLLABORATIVE LONGITUDINAL EVALUATION OF ETHNICITY AND REFRACTIVE EFFORT (CLEERE) STUDY
  - IF A CHILD IS LESS HYPEROPIC (CYCLOPLEGIC) THAN  $+0.75D$  BY FIRST GRADE, THE CHILD IS AT AN INCREASED RISK TO DEVELOP MYOPIA.
- 6 YOM OD:  $+0.25$  OS  $+0.50$
- 6YOF OD:  $+0.25$  OS PL



# MYOPIA

The best predictor for myopia onset is cycloplegic spherical equivalent refractive error at a given age

## Refractive error predicts myopia onset

Numerous risk factors can help predict myopia onset, but the best predictor is cycloplegic spherical equivalent refractive error at a given age. A child with low hypermetropic refraction for a given

age (Table 3) has greater than an 80% likelihood of myopia onset by age 13.<sup>5</sup> This approach provides a simple clinical method to evaluate risk of myopia onset that is just as accurate as more complex algorithms.

Table 3: Cycloplegic spherical equivalent autorefraction threshold by age, for children at high risk of becoming myopic by 8th grade<sup>5</sup>

AGE	6	7-8	9-10	11
REFRACTIVE ERROR	< +0.75 D	≤ +0.50 D	≤ +0.25 D	≤ +0.00 D

**\*\*Low hypermetropic refraction for a given age has greater than an 80% likelihood of myopia onset by age 13.5\*\***

# MYOPIA CONTROL CLINICAL PROTOCOL

- AGE 6-8, REFRACTION MORE MYOPIC THAN  $+0.75D$ 
  - START THE CONVERSATION
    - EDUCATE PARENTS ABOUT SPENDING TIME OUTDOORS AND VARIOUS MANAGEMENT OPTIONS; RX ATROPINE LOW DOSE, IF PARENTS ARE WILLING
- AGE  $<11$ , WITH A MYOPIC REFRACTIVE ERROR  $> -0.50$ 
  - EDUCATE PARENTS ABOUT SPENDING TIME OUTDOORS
  - START TREATMENT: CONTACT LENSES, ATROPINE, ENCOURAGE OUTDOOR TIME
  - MONITOR FOR CONTINUED PROGRESSION AND MODIFY TREATMENT IF NECESSARY

# CONTACT LENS OPTIONS

- ORTHOKERATOLOGY OR SOFT MULTIFOCAL
- RETROSPECTIVE ANALYSIS, PUBLISHED MAY 2023:
  - REAL-WORLD CLINIC DATA SHOWED NO DIFFERENCE IN AXIAL LENGTH ELONGATION BETWEEN ORTHOKERATOLOGY AND PERIPHERAL DEFOCUS CONTACT LENSES.
  - AXIAL LENGTH PROGRESSION IN THIS CLINICAL SETTING IS CONSISTENT WITH THAT REPORTED IN RANDOMIZED CLINICAL TRIALS

# CONTACT LENS FITTING FOR MYOPIA MANAGEMENT

- TECHNOLOGY NEEDED:

- A SCAN

- BASELINE AND EVERY 6 MONTHS

- TOPOGRAPHER

- BASELINE – PRIOR TO FITTING IN MYOPIA MANAGEMENT LENSES

- EVERY FOLLOW-UP APPOINTMENT

- ORTHOKERATOLOGY ONLY

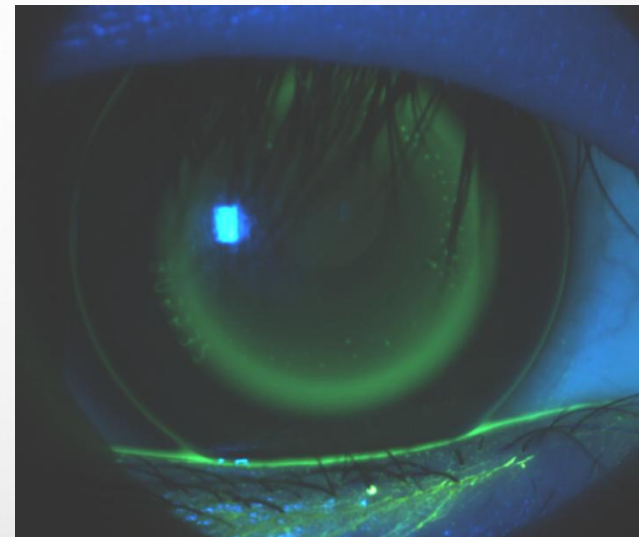
- MONITORS

- LENS POSITIONING
        - PROGRESSION OF TREATMENT
        - DETERMINING THE PROBLEM SOLVING APPROACH



# BASELINE DATA FOR CONTACT LENS FITTING

- MANIFEST REFRACTION
- SLIT-LAMP EXAMINATION
- MEASUREMENT OF CORNEAL HVVD
- PUPIL SIZE MEASUREMENT
- BASELINE CORNEAL TOPOGRAPHY
- BASELINE A SCAN
- DISCUSSION OF PATIENT MOTIVATION AND EXPECTATIONS





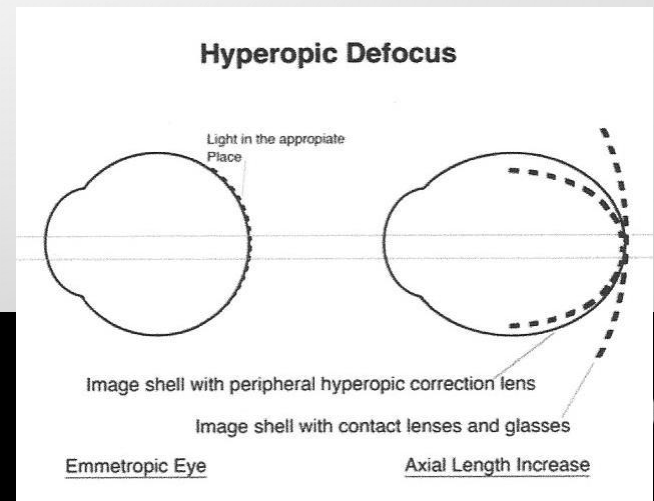
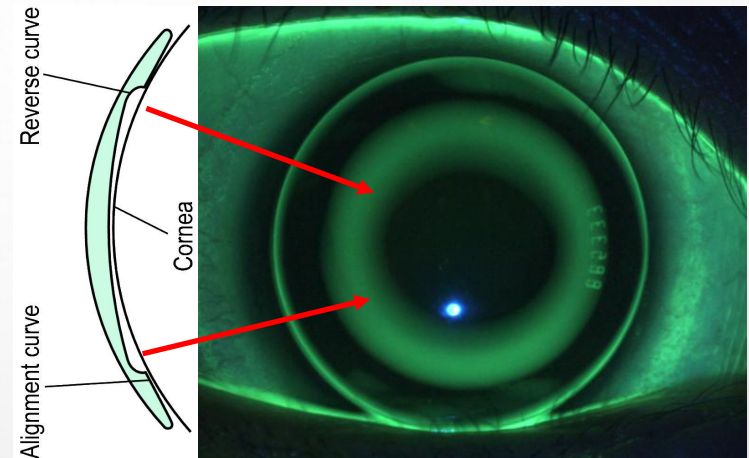
# ORTHOKERATOLOGY



# ORTHOKERATOLOGY

*OrthoK is FDA approved for overnight wear and indicated for the correction of myopia and astigmatism in patients of all ages. There is currently no FDA approval for any OrthoK lens design in the U.S. for the indication of “slowing the progression of myopia.”*

- REVERSE GEOMETRY GAS PERMEABLE LENS
- FLATTEN CENTRAL CORNEA TO CORRECT FOR MYOPIA
- MID-PERIPHERAL STEEPENING
  - CREATES LESS PERIPHERAL DEFOCUS VERSUS SINGLE PLANE CORRECTION
  - CREATES PERIPHERAL MYOPIC DEFOCUS



# PATIENT SELECTION

- FDA APPROVAL FOR CRT (CORNEAL REFRACTIVE THERAPY)
  - UP TO -6.00 D OF MYOPIA
  - UP TO -1.75 D OF ASTIGMATISM
  - NO AGE LIMITATIONS
- FDA APPROVAL FOR VST (VISION SHAPING TREATMENT)
  - -1.00 TO -5.00 D OF MYOPIA
  - UP TO -1.50 D OF ASTIGMATISM
  - NO AGE LIMITATIONS

My rules for patient selection:

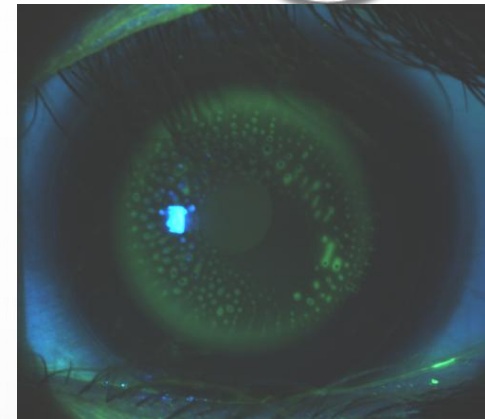
More successful:

Up to -4.00D myopia  
Up to -1.75 WTR astigmatism  
Up to -1.00 ATR astigmatism

Less Successful:

Up to -6.00D myopia  
Up to -1.75 astigmatism

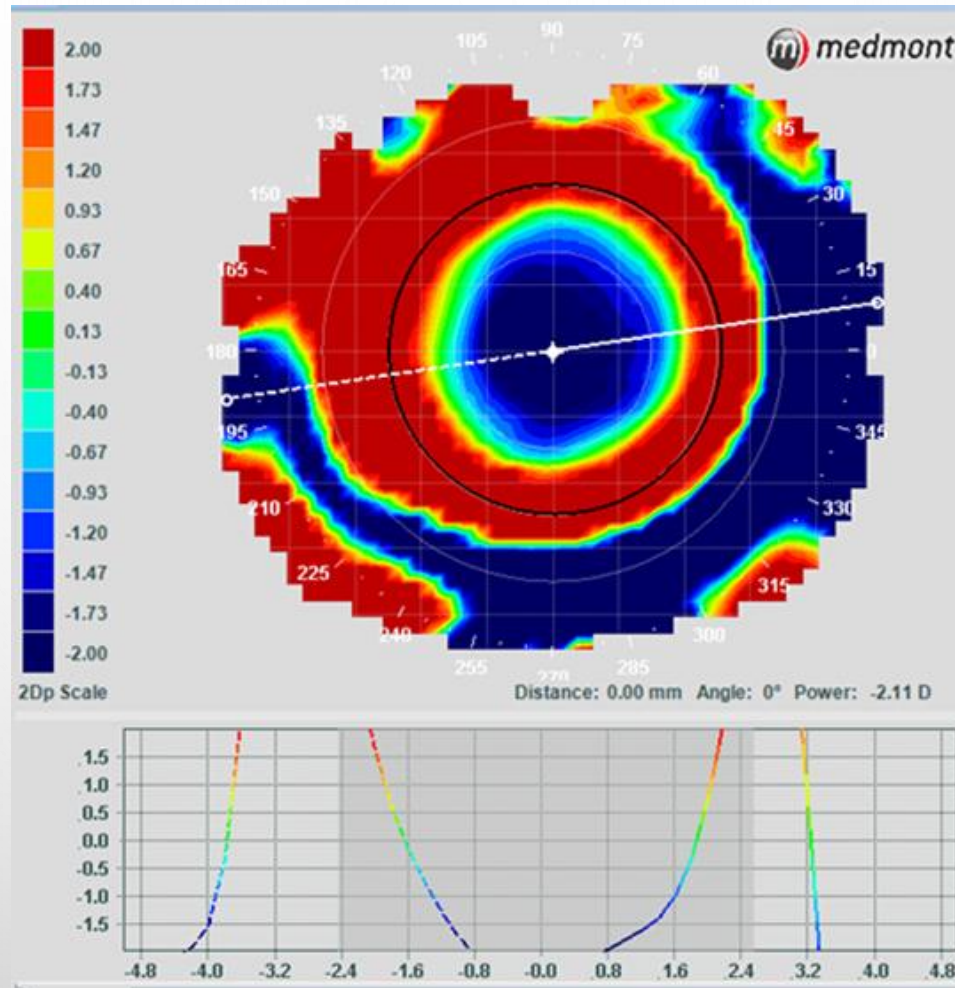
# ORTHOKERATOLOGY



## IDEAL CANDIDATES:

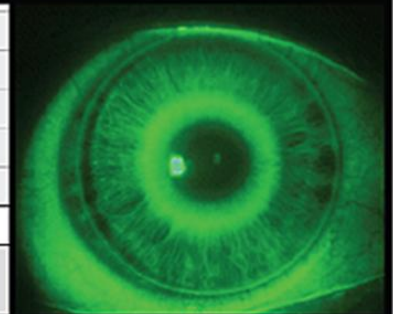
- CHILDREN WITH MODERATE MYOPIA
  - BETWEEN -1.25D TO ~-4.00D
  - LOWER MYOPIA – LESS MID-PERIPHERAL PLUS INDUCED
  - HIGHER MYOPIA – HARDER TO ACHIEVE TARGETED PRESCRIPTION
- CHILDREN WITH LARGE PUPILS

# ORTHOKERATOLOGY

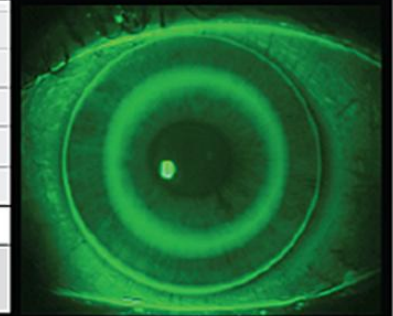


# ORTHOKERATOLOGY

## Myopia Control Design



## Adult Design



# FITTING OPTIONS

- DIAGNOSTIC SET

- LENS SELECTION FROM FLAT K(TOPOGRAPHY) AND REFRACTION
- MORE HANDS-ON FOR DOCTOR; HIGHER START UP COSTS
- EXAMPLE: PARAGON CRT

- TOPOGRAPHY DESIGNED

- HVID, TOPOGRAPHY, AND MANIFEST REFRACTION
- EXAMPLES: BE RETAINER, WAVE, EYSPACE, ARISE

- LABORATORY/FITTING SOFTWARE DESIGNED

- HVID, TOPOGRAPHY, AND MANIFEST REFRACTION
- EXAMPLES: EUCLID EMERALD, CONTEX, MOONLENS

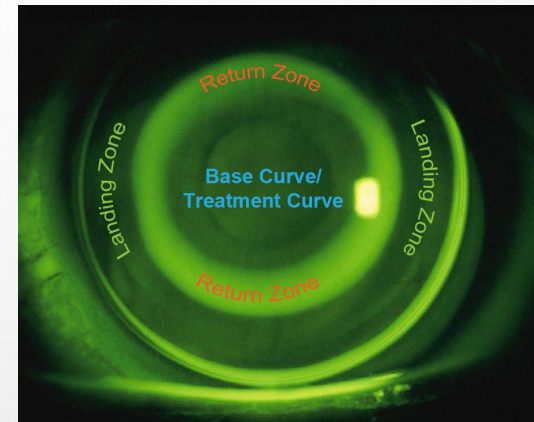


Image courtesy of paragon vision sciences

The lens base curve should be flatter than the flat K value in an amount equal to the patient refraction plus the Jesson Factor.

# ORTHOKERATOLOGY

- *LENS CARE*: HYDROGEN PEROXIDE SOLUTION
- HELPFUL TO ORDER LENSES IN TWO DIFFERENT COLORS
  - RED – RIGHT EYE                      BLUE – LEFT EYE
- *FOLLOW UP SCHEDULE*
  - 1 WEEK VS 1 DAY FOLLOW-UP APPOINTMENT
  - 2 WEEK FOLLOW-UP APPOINTMENT
  - 1 MONTH FOLLOW-UP APPOINTMENT
  - 6 MONTH FOLLOW-UP APPOINTMENT

# ORTHOKERATOLOGY

- FOLLOW-UP PROCEDURES:
  - TOPOGRAPHY
  - REFRACTION WITHOUT LENSES AND OVER-REFRACTION OF LENSES
  - CORNEAL EVALUATION
    - MAY OBSERVE SUPERFICIAL CORNEAL STAINING AT FIRST FEW FOLLOW-UP APPOINTMENTS
  - LENS FIT EVALUATION
  - A SCAN EVERY 6 MONTHS

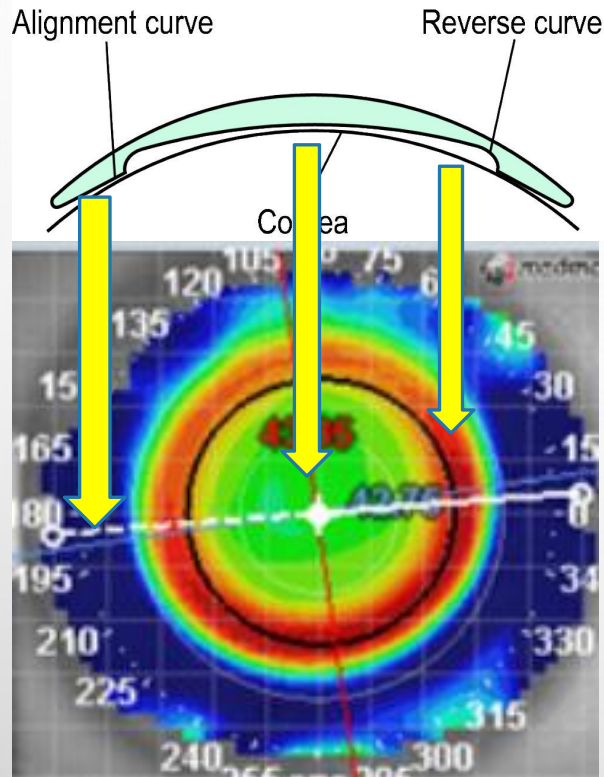


# ORTHOKERATOLOGY - REFRACTION

- REFRACTIVE ERROR AFTER LENS WEAR SHOULD BE CLOSE TO PLANO.
  - SCENARIOS TO CONSIDER:
    - 8AM REFRACTION    LOW PLUS    -- WONDERFUL, DO NOTHING
    - NOON REFRACTION    PL TO -0.25    -- NO PROBLEM, DO NOTHING
    - 3PM REFRACTION    -0.50    -- CAUTIOUSLY OPTIMISTIC
    - NOON REFRACTION    -1.00    -- MODIFY LENS PARAMETERS TO IMPROVE VISUAL OUTCOME; WILL ALSO NEED AN OR WITH LENS ON THE EYE.
  - LENS OVER-REFRACTION
    - THE OR SHOULD BE LOW, MOST LIKELY +0.50
      - THE OR SHOULD MIMIC THE “POWER OF THE LENS”
      - THE LENS POWER WILL BE SLIGHTLY HYPEROPIC

# ORTHOKERATOLOGY – TOPOGRAPHY

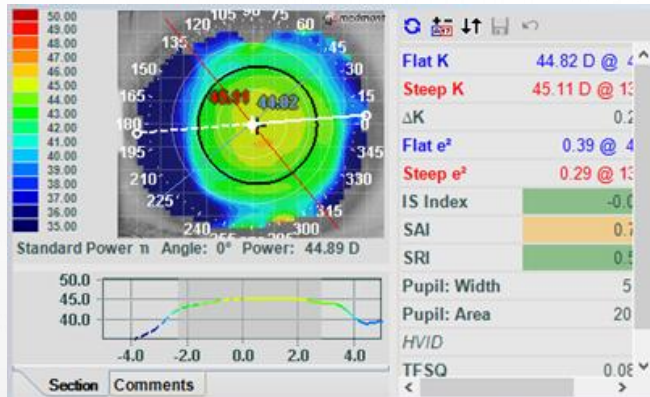
Post lens wear; Tangential Map



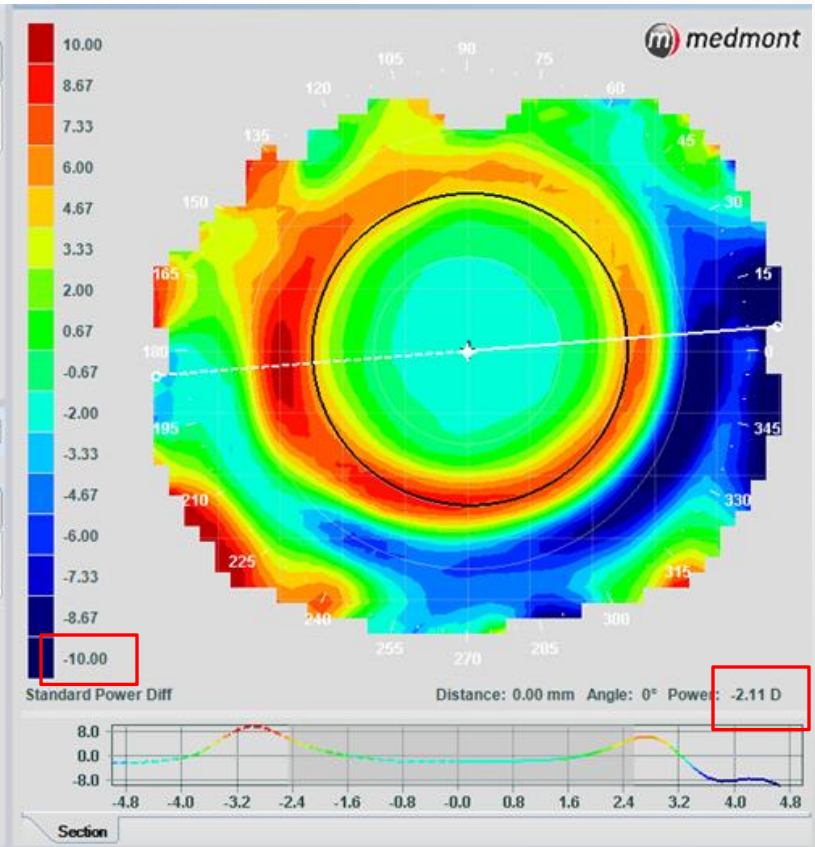
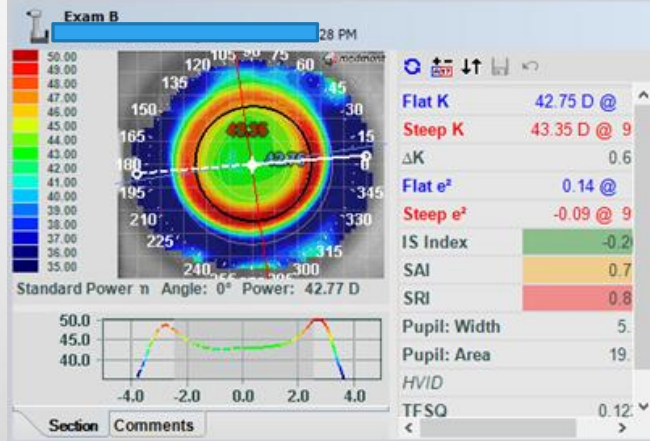
- CENTRAL FLATTENING
  - TREATMENT ZONE
- MID-PERIPHERAL STEEPENING
  - RETURN ZONE/RELIEF ZONE
- PERIPHERAL FLATTENING
  - ALIGNMENT CURVE

# ORTHOKERATOLOGY - TOPOGRAPHY

Baseline

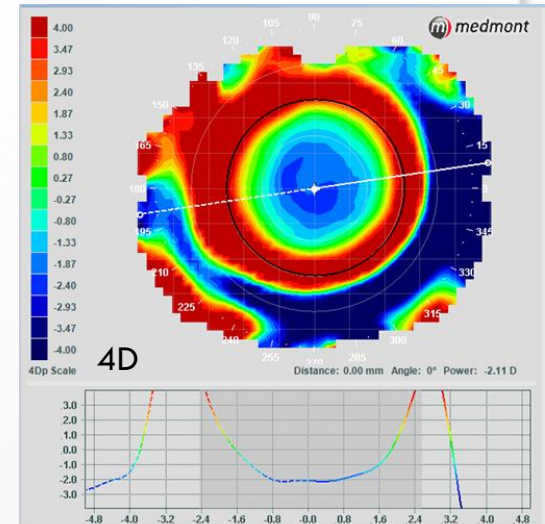
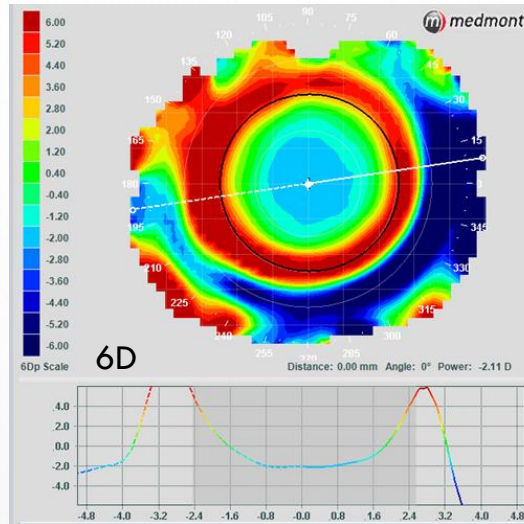
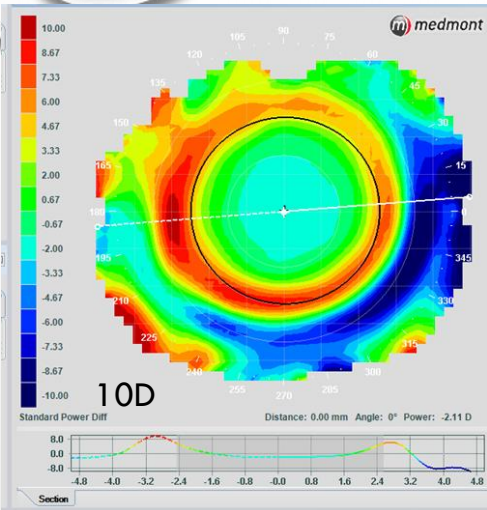


Post wear

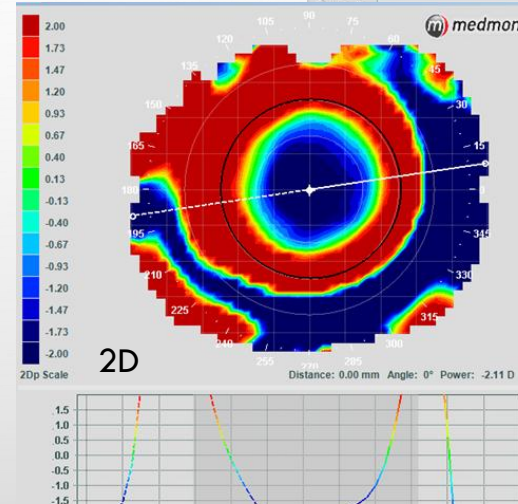
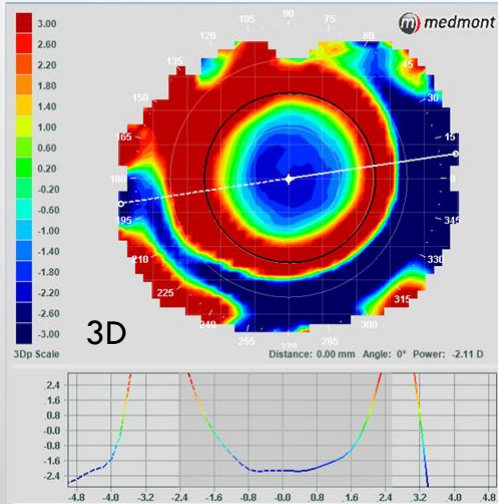


Subtractive or Difference Map; Tangential Power Map

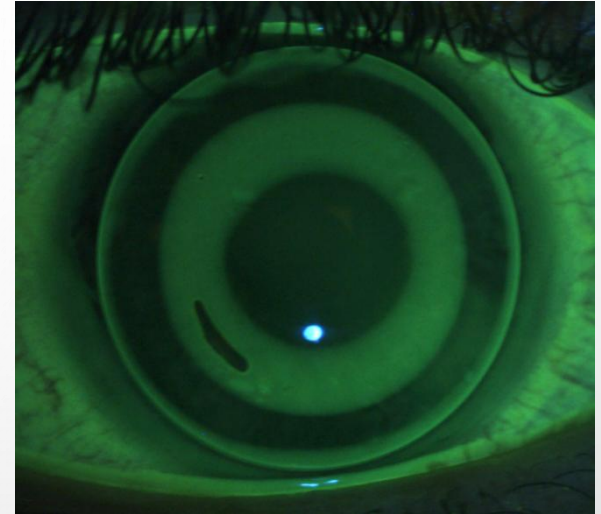
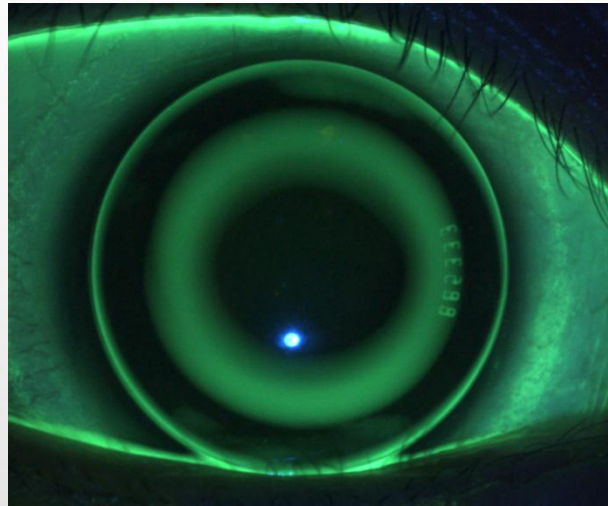
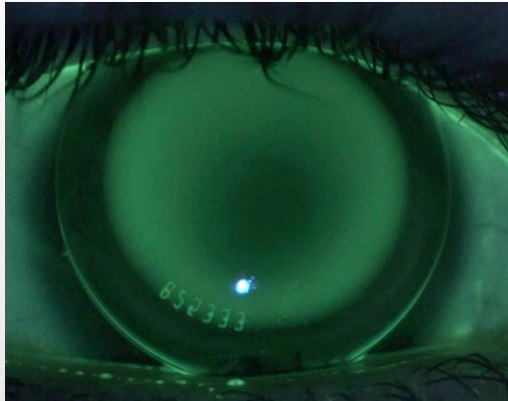
# ORTHOKERATOLOGY - TOPOGRAPHY



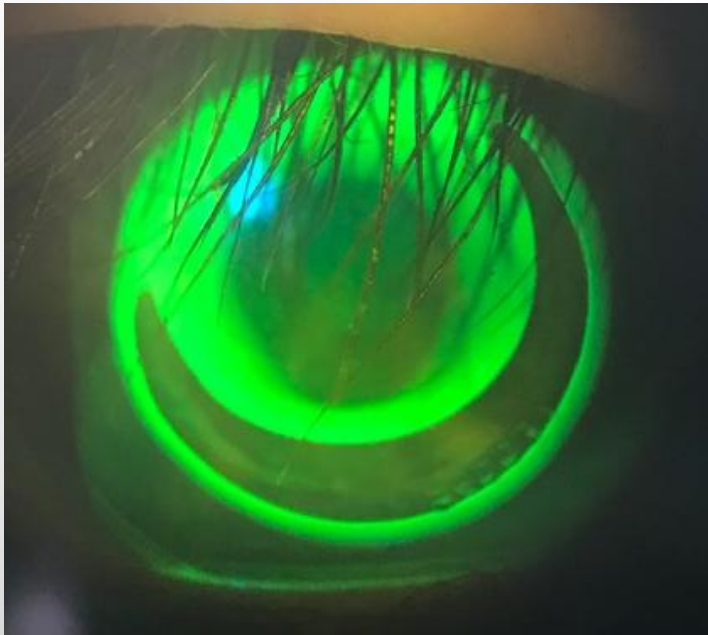
Dioptic scale comparison on subtractive map



# ORTHOKERATOLOGY – LENS EVALUATION



# ORTHOKERATOLOGY – LENS EVALUATION



# ORTHOKERATOLOGY – CLINICAL PROTOCOL

## MONITORING FOR ONGOING SUCCESS

- IF AT 6 MONTH FOLLOW-UP OR 1 YEAR FOLLOW-UP
  - REFRACTION CHANGE  $>0.50D$  OR
  - AXIAL LENGTH ELONGATION  $>0.2$
  - PATIENT MYOPIA HAS LIKELY PROGRESSED.
  - CHANGE LENS PARAMETERS TO IMPROVE VISION



# SOFT MULTIFOCAL CONTACT LENSES



# SOFT MULTIFOCAL CONTACT LENSES

SOFT MULTIFOCAL LENS ARE AN **OFF-LABEL** APPLICATION FOR SLOWING  
THE PROGRESSION OF MYOPIA, EXCEPT MISIGHT

FDA NEWS RELEASE

## FDA approves first contact lens indicated to slow the progression of nearsightedness in children

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For Immediate Release: November 15, 2019

The U.S. Food and Drug Administration today approved the first contact lens indicated to slow the progression of myopia (nearsightedness) in children between the ages of 8 and 12 years old at the initiation of treatment. The MiSight contact lens is a single use, disposable,

November 15, 2019

# SOFT BIFOCAL CONTACT LENSES

## *LENS DESIGN*

- MULTIFOCAL LENS THAT IS A CENTER DISTANCE DESIGN
- HIGHEST ADD POWER ACCEPTABLE TO THE CHILD WITHOUT COMPROMISING DISTANCE VISION

# SOFT MULTIFOCAL CONTACT LENSES

Company	Brand	Distance Powers	Add power options
Monthly options			
Coopervision	*Biofinity Multifocal "D" <i>*also available in MF toric design</i>	+6.00 to -8.00	+1.00, +1.50, +2.00, +2.50
Coopervision	*Proclear Multifocal "D" <i>*also available in MF toric design</i>	+6.00 to -8.00	+1.00, +1.50, +2.00, +2.50
Daily Disposable options			
Visioneering Technologies, Inc	NaturalVue (daily disposable)	-0.25 to -12.25D in 0.25D steps	1 Universal ADD power, effective up to +3.00D
CooperVision	MiSight	-0.50D to -6.00D 0.25D steps	1 ADD power (+2.00D)
Quarterly replacement option			
Special Eyes	54 Bifocal and Multifocal	Pl +/- 25.00	Up to +4.00

*The above designs are center Distance soft multifocal contact lenses with moderate to high add powers, commercially available in the US.*

# SOFT BIFOCAL CONTACT LENSES

## CLINICAL FITTING PROTOCOL

- INITIAL LENS SELECTION BASED ON CYCLOPLEGIC SPHERICAL EQUIVALENT REFRACTIVE ERROR
  - CENTER DISTANCE DESIGN
- HIGHEST ADD POWER ACCEPTABLE TO THE CHILD WITHOUT COMPROMISING DISTANCE VISION
- *EXAMPLE: MR -2.00 SPH*

*INITIAL LENS SELECTION: -2.00/+2.50 ADD "D" LENS*

# SOFT BIFOCAL CONTACT LENSES

## BLINK RANDOMIZED CLINICAL TRIAL

- **DOES A HIGH ADD POWER SMF (+2.50D) SLOW MYOPIA PROGRESSION MORE THAN MEDIUM (+1.50D) ADD POWER LENSES**
- 292 PARTICIPANTS; MEAN AGE 10.3 YEARS
- 3 YEAR MYOPIC PROGRESSION:

• +2.50D ADD	-0.60D	0.42MM
• +1.50D ADD	-0.89D	0.58MM
• SINGLE VISION	-1.05D	0.66MM

*TREATMENT WITH HIGH ADD POWER MF SIGNIFICANTLY REDUCED THE RATE OF MYOPIA PROGRESSION OVER 3 YEARS OVER MEDIUM ADD POWER AND SINGLE VISION.*

Walline J, Walker M, Mutti D, et al. Effect of High Add Power, Medium Add Power, or Single Vision Contact Lenses on Myopia Progression in Children.

**UMSL** | Optometry  
University of Missouri–St. Louis

# SOFT MULTIFOCAL CL

- WHAT IF CHILD CAN NOT SEE WELL WITH +2.50 ADD?
  - INITIATE A BUILD-UP PERIOD
    - BEGIN WITH +1.50 OR +2.00 ADD
      - WEAR FOR 1 MONTH
    - CHANGE TO NEXT STEP UP
      - WEAR FOR 1 MONTH
  - INCORPORATE DISTANCE OVER-REFRACTION

# SOFT MULTIFOCAL CL

- SCHULLE KL, ET AL
  - BLINK STUDY GROUP
  - *TO DETERMINE THE SPHERICAL OVER-REFRACTION NECESSARY TO OBTAIN BCVA WHEN FITTING MYOPIC CHILDREN WITH CENTER DISTANCE MFCL.*
  - CHILDREN TYPICALLY REQUIRE -0.50D TO -0.75D SOR TO ACHIEVE BCVA
    - WITH +2.50 ADD IN MFCL

# SOFT MULTIFOCAL CL

- CLINICAL FITTING PROTOCOL
  - CYCLOPLEGIC SPHERICAL EQUIVALENT REFRACTIVE ERROR
  - HIGHEST ADD POWER ACCEPTABLE TO THE CHILD WITHOUT COMPROMISING DISTANCE VISION
  - ADJUST DISTANCE POWER WITH OVER-REFRACTION FOR IMPROVED DISTANCE VISUAL ACUITY.
  - WEAR TIME FOR ADEQUATE MYOPIA MANAGEMENT IS EIGHT OR MORE HOURS EACH DAY



# SOFT MULTIFOCAL CL

- CLINICAL FITTING PROTOCOL
  - CONSIDERING THAT MISIGHT IS A +2.00 ADD AND HAS EVIDENCE OF MYOPIA CONTROL
  - BLINK STUDY DETERMINED THAT +2.50 ADD IS BEST, COMPARED TO LOWER ADD POWERS
- *PRACTITIONERS SHOULD FEEL COMFORTABLE WITH A CHILD WEARING EITHER A +2.00 OR HIGHER ADD FOR MYOPIA CONTROL, BUT NOT A LOWER ADD POWER.*

# SOFT MULTIFOCAL CL

- 11 YEAR OLD FEMALE
- OD: -1.00      OS: -0.75
  - FIT INTO BIOFINITY MF “D” LENSES
  - OD: -1.00/+2.00D 20/25-      OS: -0.75/+2.00D 20/25-
  - OR: -0.25 OD, OS
- -1.25 / +2.00D      -1.00/+2.00D      X 1 MONTH
- -1.25 / +2.50D      -1.00 / +2.50D      FINALIZED

# SOFT MULTIFOCAL CL

- 1 YEAR FOLLOW-UP
- 12 YEAR OLD FEMALE
- OD: -1.00      OS: -0.75 -0.50 X 175
  - BIOFINITY MF CENTER D – CONTINUE WITH SAME:
- -1.25 / +2.50D      -1.00 / +2.50D FINALIZED

# MYOPIA CONTROL CLINICAL PROTOCOL

- IF WEARING SOFT MULTIFOCAL AND HAVE PROGRESSION  $<0.50\text{D}/\text{YEAR}$ 
  - MONITOR WITH 6 MONTH REFRACTION CHECKS/AXIAL LENGTH MEASUREMENTS
- IF WEARING SOFT MULTIFOCAL AND HAVE PROGRESSION  $> 0.50\text{D}/\text{YEAR}$ 
  - CONSIDER INCREASING THE ADD POWER
  - ADDING LOW DOSE ATROPINE

# MYOPIA MANAGEMENT

- SCENARIOS JUST FOR FUN (THESE ARE MY ACTUAL PATIENTS!):
  - 7 YEAR OLD FEMALE: OD -4.00; OS -4.50
    - BEGIN MYOPIA MANAGEMENT IMMEDIATELY, COMBINATION TREATMENT WITH ATROPINE IF PARENT WILLING
  - 6 YO MALE: OD/OS -2.25
    - BEGAN ORTHOKERATOLOGY AFTER EDUCATING MOM
  - 10 YEAR MALE: OD: PL OS: PL-0.25 X 086
    - MONITOR, DISCUSS OUTDOOR PLAY, LOW DOSE ATROPINE
  - 15 YEAR OLD FEMALE: OD -8.75 OS -8.00
    - LIKELY TOO LATE FOR ANY SIGNIFICANT MYOPIA CONTROL, BUT DOESN'T MEAN YOU SHOULDN'T TRY

# MYOPIA MANAGEMENT

- HEY DOC – WHEN I CAN TAKE MY KIDDO OUT OF THIS SPECIAL LENS???
- 16??
- 18??
- NEVER??

# MYOPIA MANAGEMENT

- HEY DOC – WHEN I CAN TAKE MY KIDDO OUT OF THIS SPECIAL LENS???
- DOES MYOPIA STABILIZE AROUND 14-16 YEARS OF AGE?
- SOME INDIVIDUALS PROGRESS INTO 20'S
  - AGE IS A POOR INDICATOR OF WHEN TO CEASE TREATMENT
- *IF CHILD SEES WELL AND ENJOYS MYOPIA MANAGEMENT LENS MODALITY, NO REASON TO DISCONTINUE TREATMENT, EVEN IF THERE IS NO CONTINUED EVIDENCE OF MYOPIC PROGRESSION*

# MYOPIA MANAGEMENT

- HEY DOC – WHEN I CAN TAKE MY KIDDO OUT OF THIS SPECIAL LENS???
- IF CHILD WANTS TO PURSUE A DIFFERENT NON-MYOPIA CONTROL LENS DESIGN AND
- THERE IS EVIDENCE THROUGH REGULAR MONITORING THAT MYOPIA HAS CEASED TO PROGRESS, THEY CAN DISCONTINUE MYOPIA CONTROL.
- PRACTITIONERS CAN CONTINUE TO MONITOR FOR PROGRESSION AT REGULAR APPOINTMENTS.



# MYOPIA MANAGEMENT

- ORTHOKERATOLOGY 30% TO 60%
- SMF 30% TO 50%
- EASY TO EDUCATE PARENTS
- EASY TO INCORPORATE INTO CLINICAL PRACTICE
- PRACTICE BUILDER
  
- QUESTIONS?

If you have any questions, you may send an email to [dekinderj@umsl.edu](mailto:dekinderj@umsl.edu)

# Thank you! Please join us for our next COPE events



**WOO UNIVERSITY**

EYELID HYGIENE FROM OFFICE  
EDUCATION & PRODUCT  
DISPENSING TO INCREASING  
PATIENT COMPLIANCE AT HOME

*Speaker*  
**Elise Kramer, OD**



COPE accredited CE credit

**Date:** July 13, 2023  
**Time:** 5:30 PM - 6:30 PM PST

**WOO UNIVERSITY**

Myopia Management  
**LET ME DROP**  
VISION CARE PLANS

1 hour COPE approved CE

*Speaker*  
**Dr. Andrew Neukirch**



**Date:** July 19, 2023  
**Time:** 5:30 PM - 6:30 PM PST