



Integrating Myopia Management into Practice

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Financial Disclosures

- Co-Founder Dr. Contact Lens
- Co-Founder TechifEYE
- MAB- OSRX Pharmacy
- Principal Investigator- STAAR Study
- Medical Advisory Board- Visus
- Speaker Bureau- Bausch & Lomb Specialty Vision Products
- Speaker Bureau- Coopervision
- PAC- Johnson & Johnson

All relevant relationships have been mitigated.

Goals

- How to KISS myopia management for your practice
- Get back to your why
- How to simplify the myopia management process for success


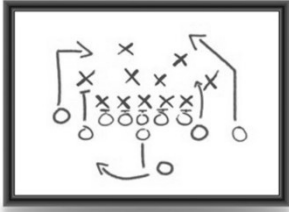


Invest in Your Future

- Thank you for being here
- Keep learning
- You never know what you will want to do next
- Find your tribe



Thank You... 2015

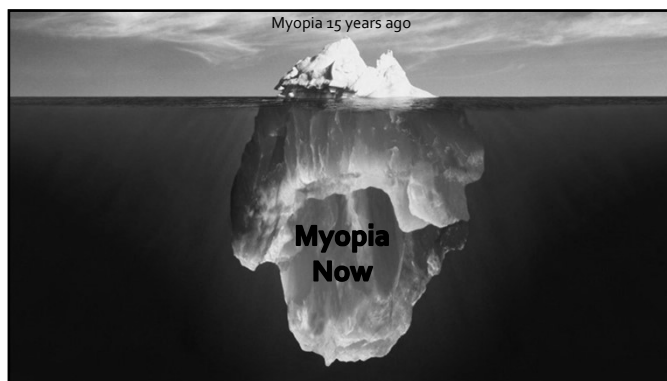
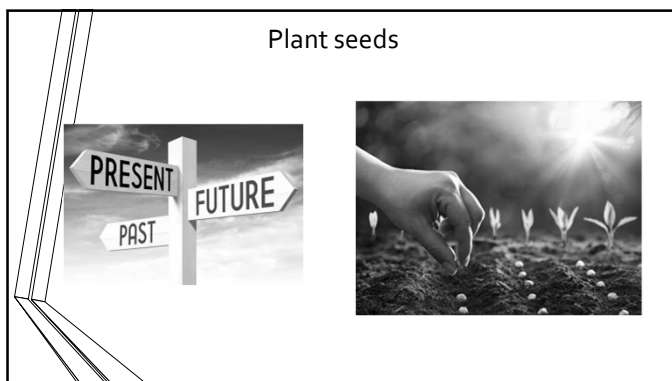



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The Optometric Oath

With full deliberation, I freely and solemnly pledge that:


- I AFFIRM** that the health of my patient will be my first consideration.
- I WILL** practice the art and science of optometry faithfully and conscientiously, and to the fullest scope of my competence.
- I WILL** uphold and honorably promote by example and action the highest standards, ethics and ideals of my chosen profession and the honor of the degree, Doctor of Optometry, which has been granted me.
- I WILL** provide professional care for the diverse populations who seek my services, with concern, with compassion and with due regard for their human rights and dignity.
- I WILL** strive continuously to broaden my knowledge and skills so that my patients may benefit from all new and efficacious means to enhance the care of human vision.
- I WILL** place the treatment of those who seek my care above personal gain and strive to see that none shall lack for proper care.
- I WILL** hold as privileged and inviolable all information entrusted to me in confidence by my patients.
- I WILL** advise my patients fully and honestly of all which may serve to restore, maintain or enhance their vision and general health.
- I WILL** strive continuously to broaden my knowledge and skills so that my patients may benefit from all new and efficacious means to enhance the care of human vision.
- I WILL** share information cordially and unselfishly with my fellow doctors of optometry and other professionals for the benefit of patients and the advancement of human knowledge and welfare.
- I WILL** do my utmost to serve my community, my country and humankind as a citizen as well as a doctor of optometry.
- I HEREBY** commit myself to be steadfast in the performance of this my solemn oath and obligation.



PRESS RELEASE
June 5, 2023

Apple provides powerful insights into new areas of health

iOS 17, iPadOS 17, and watchOS 10 introduce mental health and vision health features, and the Health app arrives on iPad



- ▶ iPhone, iPad, and Apple Watch offer new vision health features that encourage healthy behaviors that help reduce the risk of myopia
- ▶ "Mental health and vision health are important, but often overlooked, and we're excited to introduce features that offer valuable new insights to provide users with an even better understanding of their health. These insights help support users in their daily decisions and offer more informed conversations with their doctors." Sumbul Desai, M.D., Apple's vice president of Health

Apple Health

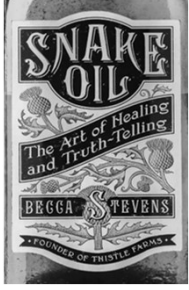
- Stand goal
- Breathe
- Heart rate monitoring/EKG/Pulse
- Fitness tracking
- Screen time
- Sleep
- Oxygen level
- Mental Status
- Medications
- Noise level

Apple: We have new technology to help you hold your phone further away to protect your eyes

Also Apple: We have new technology to pull 2 screens 1 inch away from your eyes

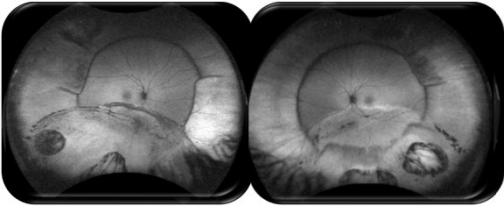


Stop being myopic about myopia management!



Chat GPT

-13.00 so what...



Resolution: The Standard of Care For Myopia Management by Optometrists

WORLD COUNCIL OF OPTOMETRY

World Council of Optometry Resolution
The Standard of Care For Myopia Management by Optometrists


1. Defines the evidence-based standard of care as comprising of three main components:

- MITIGATION - educating parents and patients on risk factors to delay onset of myopia
- MEASUREMENT - regular eye exams (frequency not advised by the WCO) with measurement of refractive error and axial length wherever possible
- MANAGEMENT - addressing patient needs today by correcting and attempting to control myopia, for improved quality of life and better eye health today and into the future.

A little about me...



My Myopic Passion



Dalton

https://www.myopia.care/public_myopia

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Myopia and the Media

Our Digital Era

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

For Immediate Release: November 15, 2019

Johnson & Johnson Vision's ACUVUE Abiliti OrthoK Receives FDA Approval

May 12, 2021

Johnson & Johnson Vision Receives Approval in Canada for ACUVUE® Abiliti™ 1-Day Soft Therapeutic Lenses for Myopia Management

NEWS PROVIDED BY: Johnson & Johnson Vision™ Sep 08, 2021, 09:00 ET

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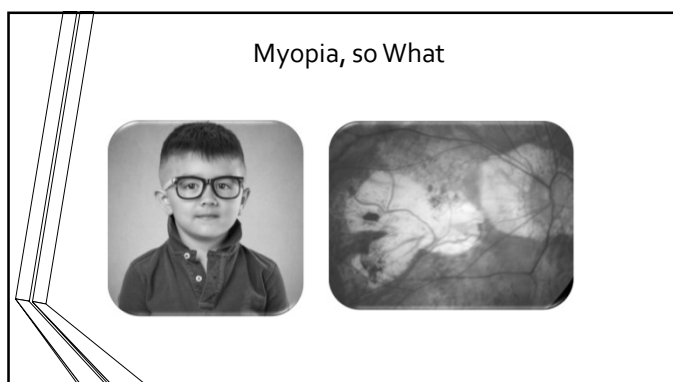
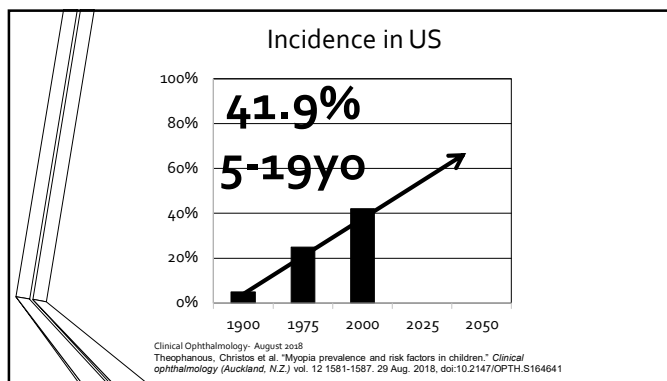
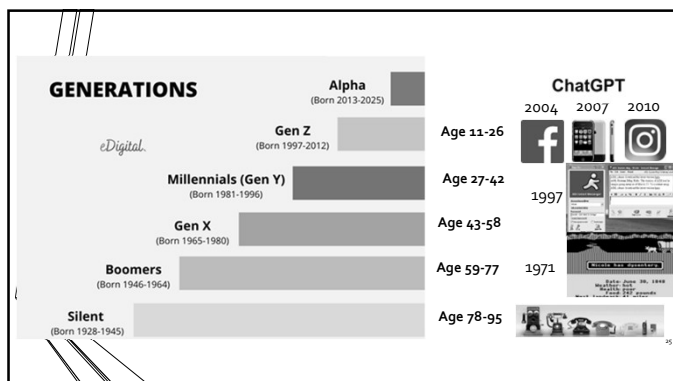
Myopia Guide

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Prevalence of Myopia

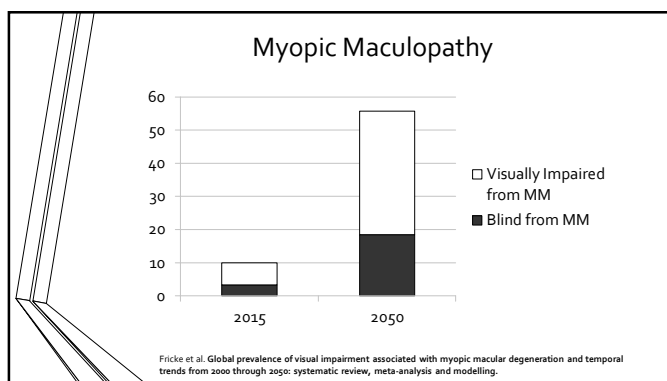
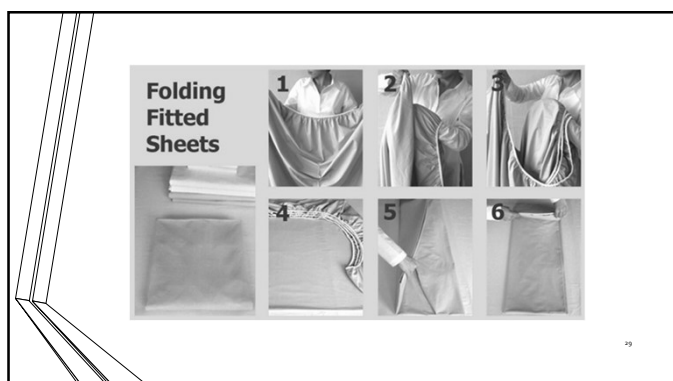
2020	7 people icons, 2 with glasses	30% Myopic, 2% High Myopia
2050	7 people icons, 5 with glasses	50% Myopic, 10% High Myopia

In 2016 the WHO and the Brien Holden Vision Institute recognized myopia as a public health issue.³




Why the Big Deal?

- Myopic Maculopathy
 - Stretched blood vessels
 - Peripapillary atrophy
 - Posterior staphyloma
 - Lacquer cracks
 - Geographic atrophy
 - Subretinal hemorrhages
 - Choroidal neovascularization



Myopic Maculopathy



Progression of Myopic Maculopathy during 18-Year Follow-up

Fang Y, Yokoi T, Nagaoka N, Shinohara K, Onishi Y, Ishida T, Yoshida T, Xu X, Jonas JB, Ohno, Matsui K. Progression of Myopic Maculopathy during 18-Year Follow-up. *Ophthalmology*. 2018 Jun;125(6):863-877. doi: 10.1016/j.ophtha.2017.12.005. Epub 2018 Jan 19. PMID: 29371011.

Average Age
47.7 ± 14.2
Years
Range: 7 to 76

Average
Visual Acuity
20/50



The Disruptees can become the Disruptors




1800 contacts


How many ODs, ethically, have stopped fitting single vision soft lenses on kids who are progressing myopes? No judgement. Even if not doing myopia control, would you fit a multifocal just to get some plus on the eye?

This is almost as ridiculous as saying you'd refuse to give a myopic child glasses because they're likely to progress. I'm all for advocating myopia control but there is not an ethical conflict here.

Dear Lord...Myopia is not the plague!! Enough of this fear mongering. Thank God I'm a -3, my daughter a -5.50, and my wife a -6!!! It helps immensely with our CI at 12, 16, 20 XP respectively.

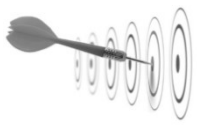
The Game Plan

1. Commit
2. Kids
3. Analyze your practice
4. Educate yourself
5. Build your program-
6. Staff training
7. Invest in equipment
8. The Myopic Exam
9. Select the Treatment
10. Elevator Pitch



Goal

**Keep myopia below -3.00
and
Axial length below 26mm**



Myopia Control vs Myopia Management

Myopia Control

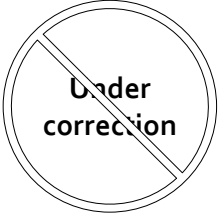
- Slows the progression of myopia in age-appropriate children
 - MiSight

Myopia Management

- Refers to the decision to implement a strategy to slow down the progression of myopia in a child
 - Low-dose atropine
 - Ortho-k
 - Soft multi-focals

Single Vision Glasses & Contacts

- Single vision glasses & contacts have **NO** effect on slowing progression
 - 80% of practitioners acknowledged this
- 64% of myopic children around the world are treated with a single vision option



Under correction

James Wolffsohn: Global trends in myopia management attitudes and strategies in clinical practice – 2019 Update

Step 1: Commit



Rethink "Refractive error"

disease [dih-zeez] SHOW IPA ☆

See synonyms for: disease / diseased / diseases / diseasing on Thesaurus.com

Elementary Level

noun




- a disordered or incorrectly functioning organ, part, structure, or system of the body resulting from the effect of genetic or developmental errors, infection, poisons, nutritional deficiency or imbalance, toxicity, or unfavorable environmental factors; illness; sickness; ailment.
- any abnormal condition in a plant that interferes with its vital physiological processes, caused by pathogenic microorganisms, parasites, unfavorable environmental, genetic, or nutritional factors, etc.
- any harmful, depraved, or morbid condition, as of the mind or society: His fascination with executions is a disease.
- decomposition of a material under special circumstances: tin disease.

Redefining Myopia

- Old definition: A refractive error in which rays of light entering the eye parallel to the optic axis are brought to a focus in front of the retina when ocular accommodation is relaxed
- A modern definition: Myopia is a chronic, progressive disease characterized by excessive eye elongation, risk of associated sight-threatening complications, and a negative-powered refractive error.

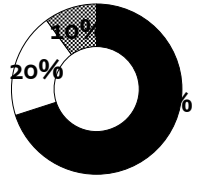
Step 2

Kids... You have to want and LIKE to see kids






Step 3- Analyze your Practice

Clinic By Refractive Error



- Myopia
- Hyperopia
- ▨ None



Step 4- Educate Yourself-

- Brien Holden Myopia Course
 - <https://bhvi.org/myopia-education-program/>
- Myopia Profile
 - Myopiaprofile.com + Myopia Profile Facebook Group
- Vision By Design Conference- Sept 6-10
- Review of Myopia Management
 - Bullers2020.com
 - MiSight Certification
 - Abiliti Certification
 - Treehouse Eyes
 - Hoot Myopia
 - OK Love

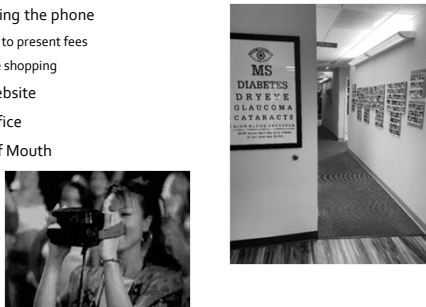


Step 5- Developing your Program

- Develop your program before you start treating your first patient
 - How will you present the options
 - Different visit- Myopia Consultation
 - This is a non-covered service billed outside of any managed care insurance or vision program
 - Evaluate Chair Cost- what you charge maybe different from what your neighbor charges
 - Global fee
 - Per visit fee
 - Missed follow up visits?
 - Handouts
 - Contracts
 - Compounding pharmacy
 - Ortho-k training/ in office fitting vs empirical fitting

Step 6- Staff Training


- Answering the phone
 - How to present fees
 - Price shopping
- Your website
- Your office
- Word of Mouth




Step 7- Equipment

- Topography
- Axial length

Axial Length Devices

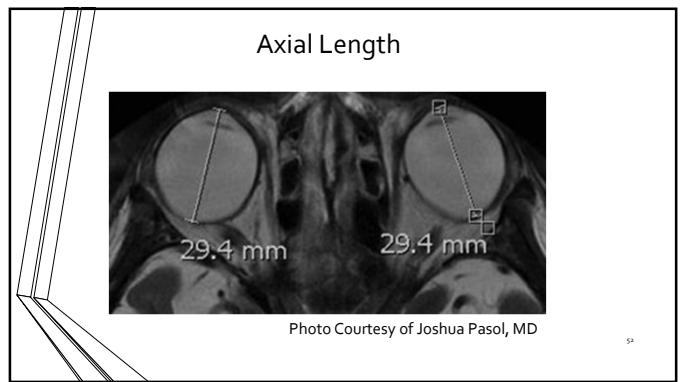
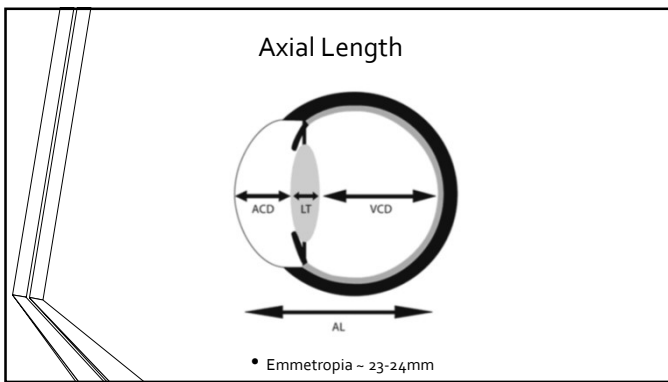
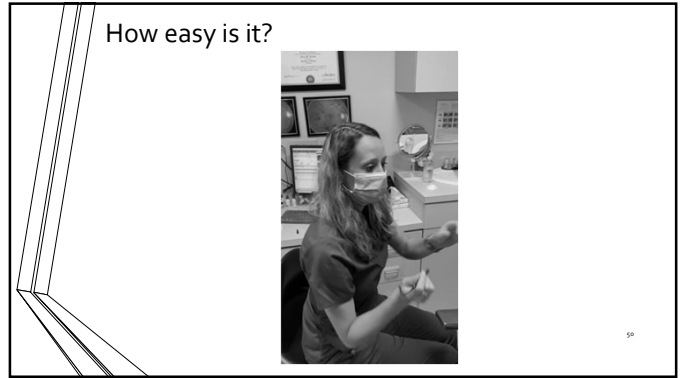
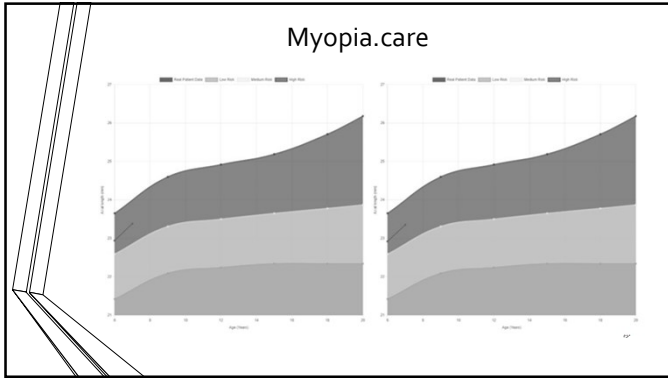


Measuring Axial Length



Dalton	Myself
OD: 22.92	OD: 25.11
OS: 22.94	OS: 25.17

Dalton	Myself
OD: +1.00	OD: -5.50
OS: +1.00	OS: -5.50



Axial Length Norms*

Age	Girls	Boys	European	Chinese
6- 7 yo	22.75 mm	23.05 mm	22.33 mm	22.77 mm
8-9 yo	23.29 mm	23.65 mm	23.05 mm	24.02 mm
10-11 yo	23.76 mm	24.09 mm	-	-
12-14 yo	23.80 mm	24.25 mm	23.40 mm	24.69 mm

*Caution must be taken when applying this data clinically, as many confounding factors affect these norms, including but not limited to, gender and racial background.

Fuentsanta A. Vera-Diaz, OD, PhD, FAAO. The Importance of Measuring Axial Length. Review of Myopia Management. August 9, 2020 <https://reviewofmm.com/the-importance-of-measuring-axial-length-when-managing-childhood-myopia/>

Axial Length & Refractive Error

	Refractive Error	Axial Length
OD	-4.75-0.75x010	23.91
OS	-5.00-0.75x180	24.11

	Refractive Error	Axial Length
OD	-5.50-0.50x180	27.28
OS	-5.50-0.50x165	27.24

*Refractive error does not correlate with axial length

Refraction and Axial Length

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Axial Length and Myopic Disease

24.84 mm 27.63 mm

Diopters are easy to measure, but myopia management is about axial length control

Move from diopters → millimeters

25 mm

1 inch

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Risk of Visual Impairment by Age 75

AL < 24 mm	24 ≤ AL < 26 mm	26 ≤ AL < 28 mm	28 ≤ AL < 30 mm	AL ≥ 30 mm
6.9%	3.8%	25.4%	26.6%	90.6%

Tideman JW, Snabel MC, Tedja MS et al. Association of Axial Length With Risk of Uncorrectable Visual Impairment for Europeans With Myopia. *JAMA Ophthalmology*. 2016;134:1355-63.

<https://www.youtube.com/watch?v=5X58yYt8AHE>

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• The earlier the onset the higher chance for high myopia

Chua SY, Sabanayagam C, Cheung YB, Chia A, Valenzuela RK, Tan D, Wong TY, Cheng CY, Saw SM. Age of onset of myopia predicts risk of high myopia in later childhood in myopic Singapore children. *Ophthalmic Physiol Opt*. 2016 Jul;36(4):388-94. doi: 10.1111/opo.12305. PMID: 27350183.

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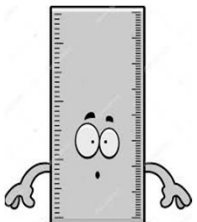
Growth and Progression

Children that develop myopia by age 7 to 9 have a 54% to 80% change of progressing past -5.00

Hu Y, Ding X, Guo X, Chen Y, Zhang J, He M. Association of Age at Myopia Onset With Risk of High Myopia in Adulthood in a 12-Year Follow-up of a Chinese Cohort. *JAMA Ophthalmol*. 2020;138(11):1129-1134. doi:10.1001/jamaophthalmol.2020.3451

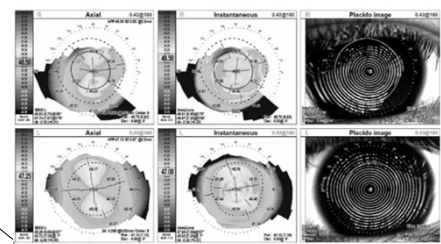
Axial Length vs Refractive

- 5 Year old- Parents worried about retina and wanted second opinion on what to do
 - Current Spectacle:
 - OD: -8.00-0.75x164 20/200
 - OS: -5.00-1.75x178 20/60
 - Refraction:
 - OD: -10.00-2.00x180 20/60
 - OS: -5.50-2.00x010 20/50
 - Cyclo:
 - OD: -10.00-2.00x180
 - OS: -5.50-2.25x010

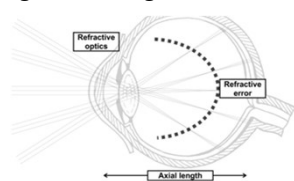


5 Year Old

	Refractive Error	Axial Length	K's
OD	-10.00-2.00x180	25.30	49.93@089/47.74@179
OS	-5.50-2.00x010	24.73	48.28@097/45.73@007



Calculating Axial Length with What You Have



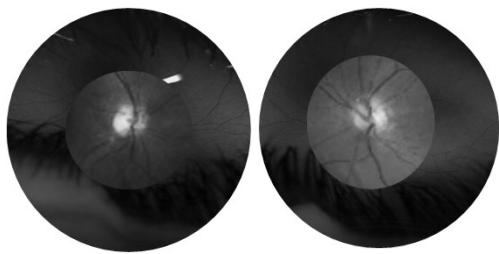
Axial Length Estimator

Axial Length Estimate

Right Eye	25.81 mm	Left Eye	24.83 mm
	25.30		24.73

<https://coopvision.co.uk/practitioner/clinical-resources/myopia-in-children/axial-length-estimator/calculator>

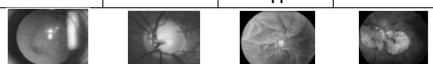
5 Year Old



TX: Update RX parents education full time wear
 Start Atropine 0.025% 1 drop QHS
 RTC 4 weeks atropine follow up then every 3 months

Why the Big Deal

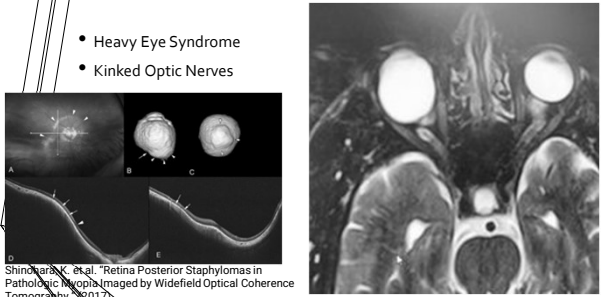
Refraction	PSC Cataract	Glaucoma	Retinal Detachment	Myopic Maculopathy
-1.00 to -3.00	2	2	3	2
-3.00 to -6.00	3	3	9	9
-6.00 to -7.00	5	3	21	41
>-7.00			44	126



Flitcroft DJ. The complex interactions of retinal, optical and environmental factors in myopia aetiology. Prog Retin Eye Res. 2012;31:622-60.

Axial Length

- Heavy Eye Syndrome
- Kinked Optic Nerves

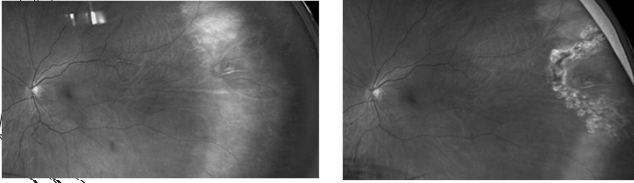


Shinozaki K, et al. "Retina Posterior Staphylomas in Pathologic Myopia Imaged by Widefield Optical Coherence Tomography." (2017)

Image Courtesy Joshua Pasol, MD

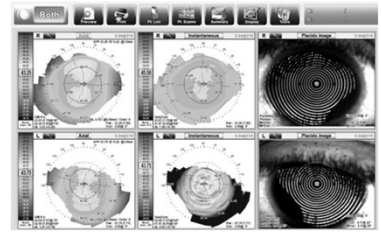
Why Does this Matter?

- 59 year old comes in for annual exam – no complaints
- OD: -3.25 sph
- OS: -3.50-0.25 x 010

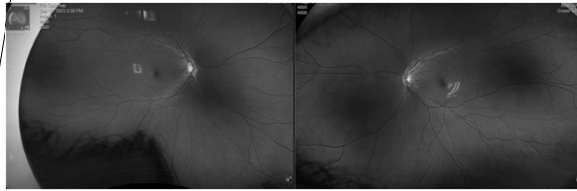


9 Year Old- Can't See the Board

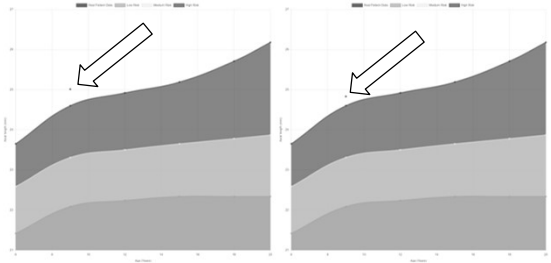
OD: 20/40- OD: -1.00
 OS: 20/40- OS: -1.25



OD: 43.83@086/42.40@176
 OS: 44.00@079/42.99@169



OD: 25.01 OS: 24.83

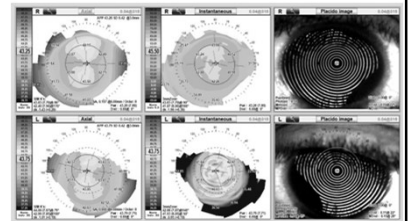


Treatment

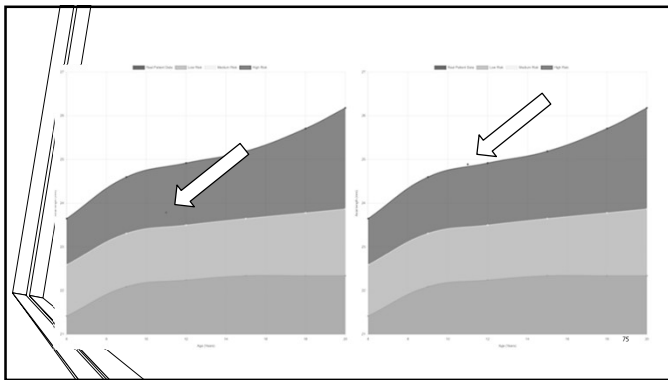
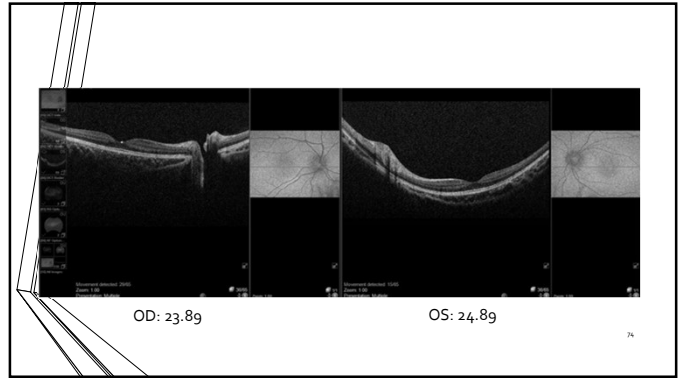
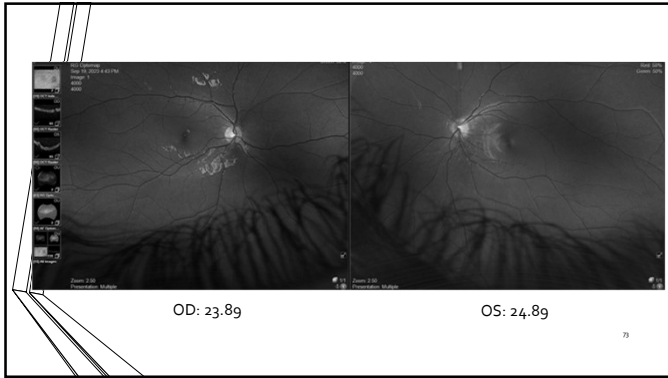
- Parents opted for dual-focus contact lenses and began treatment that day

11 year old- Second Opinion

OD: 20/50- OD: -1.00
 OS: 20/400- OS: -4.50



OD: 43.87@086/42.40@176
 OS: 44.00@079/42.99@169



Treatment

- Parents wanted to discuss with her ophthalmologist again on what to do

- ### Step 8- The Myopic Exam
- History (Family history, near work, outdoor time)
 - Assess the risk factors
 - Age of onset, progression (if myopic)
 - Visual acuity (uncorrected, best corrected)
 - Corneal topography
 - Pupil size- dim and light
 - Binocular vision (lag, eso/exophoria, AC/A)
 - Axial Length (average of at least 5 readings)
 - Pachymetry
 - Objective/subjective cycloplegic refraction
 - 1% Tropicamide → 2 drops 5 minutes apart
 - Anterior/posterior examination
 - IOP

Assess the Risk Factors

- Genetics
- Near Work
- Outdoor time
- Education
- Ethnicity
- Age of Onset
 - Current prescription
- Other (prematurity, diet, light exposure)

What is the Cycloplegic Refraction?

Age	Normal	Refractive Error @ Risk
6 years old	+1.75 → +1.50	+0.75 or less
7 years old	+1.50 → +1.25	+0.50 or less
8 years old	+1.00	+0.50 or less
9 years old	+0.75	+0.25 or less
10 years old	+0.50	+0.25 or less
11 years old	+0.50 → +0.25	0.00 or less

- Tropicamide 1%, 2 drops 5 mins apart
- Follow up every 6 months, sooner if risk factors are high or patient is changing

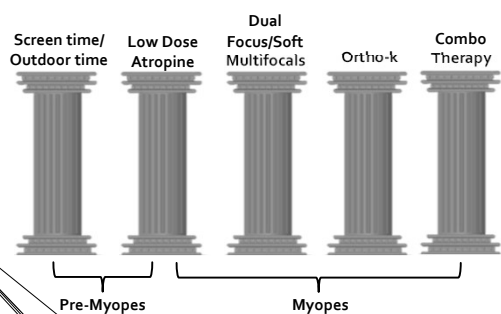
Pre-Myopes

≡ < +0.75 @ 6-7yo is high risk

- Independent of family history, ethnicity and other optical and environmental factors.⁷
- Fastest change in refraction is year before onset.
- Watch for eso and lag of accommodation

Jones-Jordan LA, Sinnott LT, Manny RE, Cotter SA, Kleinstein RN, Mutti DO, Twellker JD, Zadnik K, Ethnicity tCLEO, Refractive Error Study Group. Early Childhood Refractive Error and Parental History of Myopia as Predictors of Myopia. Invest Ophthalmol Vis Sci. 2010;51(1):115-23

Step 9- Selecting the Right Treatment



Why Every Diopter Matters

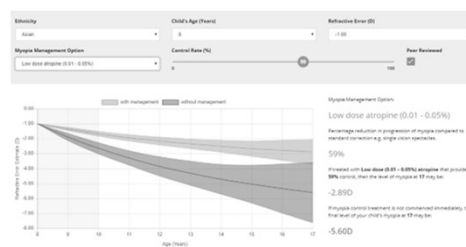
- 3 benefits of lowering a patient's level of myopia for the long-term care
 - Less visual disability when uncorrected
 - Better options for, and outcomes from, surgical myopia correction
 - Reduced risk of blindness associated with higher levels of myopia

Bullimore, Mark A. MCOptom, PhD, FAAO[®]; Brennan, Noel A. MScOptom, PhD, FAAO[®] Optometry and Vision Science: June 2019 - Volume 96 - Issue 6 - p.463-465

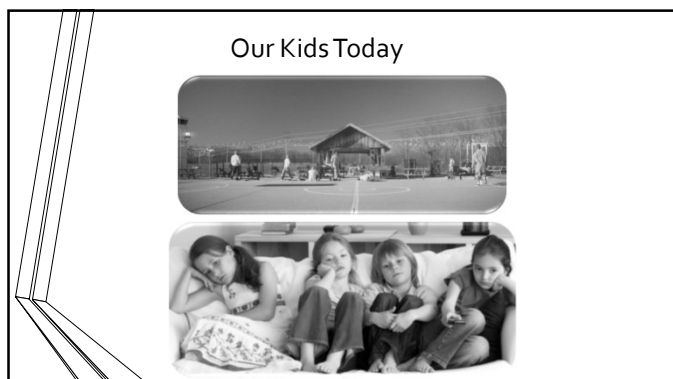
Treatment Goals

- Present the options to the parent and child and decide together what is best
- Set realistic expectations for treatment
- Atropine, MF contacts, Ortho-k all have around 50%-70% efficacy *depending on studies
 - Children will still likely progress depending on age of onset
 - Which ever method you choose you are providing evidence based myopia treatment
- Atropine should be reserved for younger children and contacts lenses should be fit as soon as patient and parent are ready to help slow progression even more
- Dual treatments are becoming more common

So What If No Tx...



Brien Holden Calculator: <https://bhvi.org/myopia-calculator-resources/>



Screen time Recommendations

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN

<p>18 months or younger</p> <p>No screens are still best. The exception is live video chat with family and friends.</p>	<p>18 months to 2 years</p> <p>Limit screen time and avoid solo use. Choose high-quality educational programming, and watch with kids to ensure understanding.</p>	<p>2 to 5 years</p> <p>Limit screen time to an hour a day. Parents should watch as well to ensure understanding and application to their world.</p>	<p>6 or older</p> <p>Place consistent limits on the time spent and types of media. Don't let screen time affect sleep, exercise or other behaviors.</p>
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American Academy of Pediatrics

Get Outside and Play

40- 80 minutes

Dharani, R et al. "Comparison of Measurements of Time Outdoors and Light Levels as Risk Factors for Myopia in Young Singapore Children." Eye 26.7 (2012): 911-918.

➔

↓23% to 50%

Pre-Myopes & Myopes

THE 20-20-20 RULE
Reducing the effects of Computer Vision Syndrome

2

TOUCH GRASS

Send grass anywhere!

[Order Now](#)

1. Write a note
We ship all of our grass with a custom note. You get to write whatever you'd like to the recipient.

2. Give us an address
Most people prefer giving grass to a friend or foe who desperately needs to go outside. But you may also order some for yourself.

3. Send anonymously
If you're sending grass to a friend who is in desperate need of touching grass, you can do so anonymously.

Relationship between Sleep and Myopia

Relationships between Sleep Duration, Timing, Consistency, and Chronotype with Myopia among School-Aged Children

- 10,142 children surveyed (7-12 yo)
- 42% of children meet the recommendation for sleep (9-11 hours)
- Later bed time and later wake up time increased risk
- Shorter sleep duration had increased risk

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9325560/>

Optical Correction

CooperVision and Essilor Partner to Accelerate Access to SightGloss Vision Technology & Expand Myopia Management Category

February 02, 2023

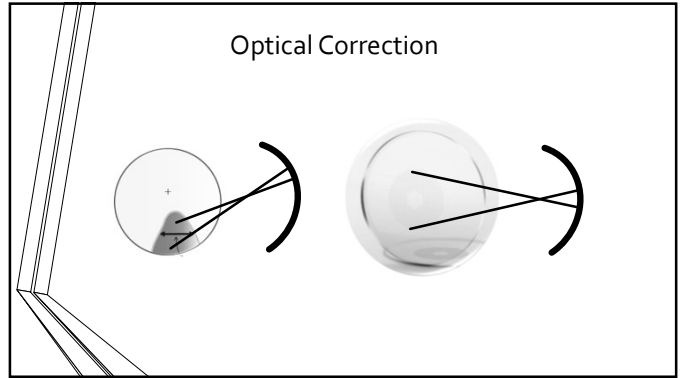
HOYA
Johnson MyoGuard™ OrthoK Segments (MMS)
美國及中國藥監局 (FDA) 批准註冊醫療器械

MyoVision™ by ZEISS

Myopilux
Myopilux Max
The most effective form of myopia control, up to 90%
Myopilux Max offers:
• Slow down myopia
• Stop myopia
• Prevent loss of vision

Myopilux Pro
The most effective form of myopia control, up to 90%
Myopilux Pro offers:
• Slow down myopia
• Stop myopia
• Prevent loss of vision

ESSILOR'S GAME-CHANGING STELLEST™ LENS SHOWN TO SLOW DOWN MYOPIA PROGRESSION IN CHILDREN BY MORE THAN 50% AFTER ONE-YEAR INTERIM CLINICAL TRIAL



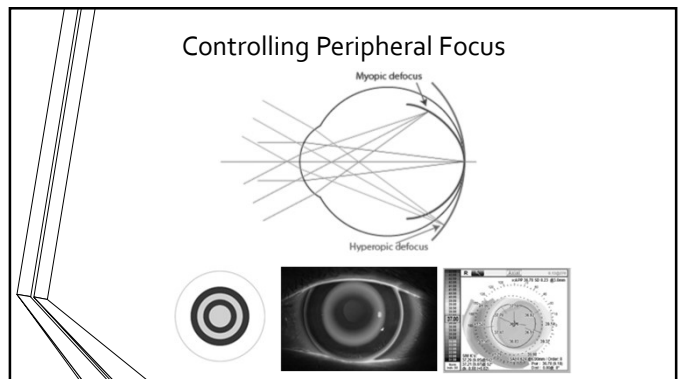
Atropine Treatment Protocol

- 1 drop 0.025% or 0.05%(QHS) daily
- Can start as young as 3 years old
- Slows rate of progression by 30% - 70% concentration dependent
- In the first 6 months, may still see progression

Look for a 2mm dilation in pupil

Atropine Evaluation Schedule

- 4 week follow up (make sure they got their drops and are using them)
- 3 month after starting to ensure no side effects/compliance
- Start assessing treatment efficacy at 6 months
- Assess for progression every 6 months
 - VA
 - Binocular vision
 - A-scan
 - Refraction/Topography
 - If >0.25-0.50 D of change at 1year consider changing dosage
- If stable for 2 years or past the age of 13 → Taper



MiSight® 1 day myopia control soft contact lenses

Two correction zones to correct myopia so children enjoy clear, spectacle-free vision

Two treatment zones (2.00D myopic defocus) to place the treatment zone image in front of the retina

- treatment zones creating myopic defocus
- correction zones

97

MiSight Study

- Three-year randomized, controlled clinical trial (4 study sites)
- 135 children ages 8 to 12 at the start of treatment
- MiSight vs. conventional soft contact lens
- Results – (for the full three-year period) progression in myopia of those wearing MiSight lenses was less than those wearing conventional soft contact lenses
- In addition, subjects who used MiSight had less change in the axial length of the eyeball at each annual checkup.
- There were no serious ocular adverse events in either arm of the study

Slowed progression by:
59% cycloplegic spherical equivalent (SE) and
52% mean axial elongation of the eye

<https://www.fda.gov/news-events/press-announcements/fda-approves-first-contact-lens-indicated-slow-progression-nearsightedness-children>

The Future of Soft Contact lenses for Myopia Management

September 8, 2021

Johnson & Johnson Vision Receives Approval in Canada for ACUVUE® Abiliti™ 1-Day Soft Therapeutic Lenses for Myopia Management

ACUVUE® abiliti™ 1-DAY SOFT THERAPEUTIC LENSES FOR MYOPIA MANAGEMENT

Menicon Bloom Day™ Menicon BLOOM™

Myoptechs™

Benefits

- Soft daily contact lens CE approval for myopia control in Europe
- Myopia control and myopia correction combined
- Lens fitting and progress monitoring via optimized, easy-to-use Easyfit module
- Direct contact and monitoring of patients through the Menicon Bloom app and Menicon Bloom Easyfit
- Clear agreements between eye care specialist and patient through informed consent
- Very hygienic, a new set of lenses every day

100

- Treatment zones creating myopic defocus
- Correction zones

100

Why Don't We Give More ADD?

High ADD from bifocal/duo focus designs leads to halos

Retinal Plane

Ray tracing images courtesy of Dr. James Schwiegerling, University of Arizona, Phoenix, Department of Optics

Impact: Increased range of functional vision with minimal impact on vision

Catenary optic ray tracing


Retinal Plane

EDOF Channel:
 Width of the channel determines the sharpness of the images
 Length of the channel determines the range of functional vision

Ray tracing images courtesy of Dr. James Schwiegerling, University of Arizona, Phoenix, Department of Optics

Dual Focus Soft Contact Lens Evaluation Schedule

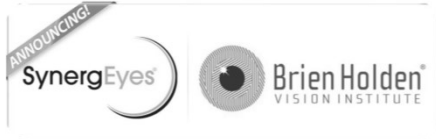
- Year 1 Follow up schedule
 - 1 week
 - Enroll in the program
 - 1 month
 - Can be done in the office (highly preferred or via telemedicine)
 - Then every 3 months for the first year
- Year 2 Follow up schedule
 - Annual exam
 - Every 6 months if progression has slowed < -0.50D



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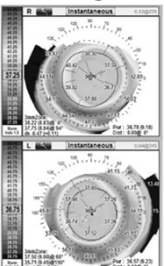
Astigmatism >1.25

- Extended depth of focus
- Center distance
- Can fit empirically with K's and refraction
- Hybrid Lenses
- Ortho-k

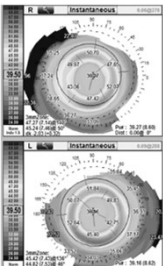


Which is which?

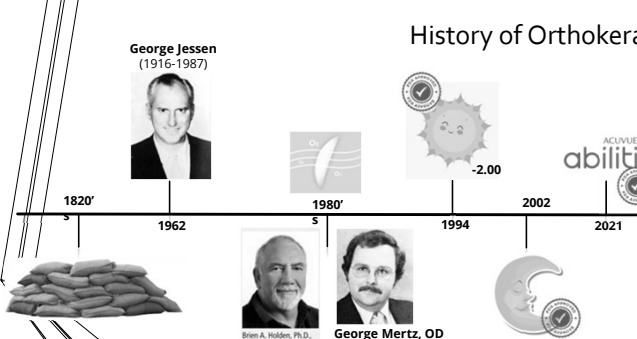
LASIK



ORTHO-K



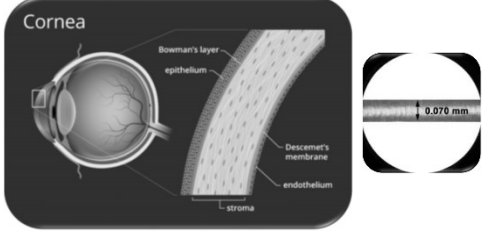
History of Orthokeratology



Timeline highlights:

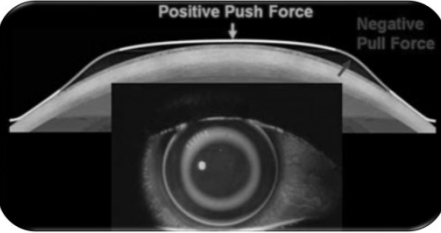
- 1820: S. (Sandwich)
- 1962: George Jessen (1916-1987)
- 1980: S. (S. A. Holden, Ph.D., F.A.A.O., D.Sc., O.A.M.)
- 1994: George Mertz, OD (1946-2002)
- 2002: -2.00 (ACUVUE abiliti)
- 2021: -4.00 (ACUVUE abiliti)

Ortho-k and the Cornea

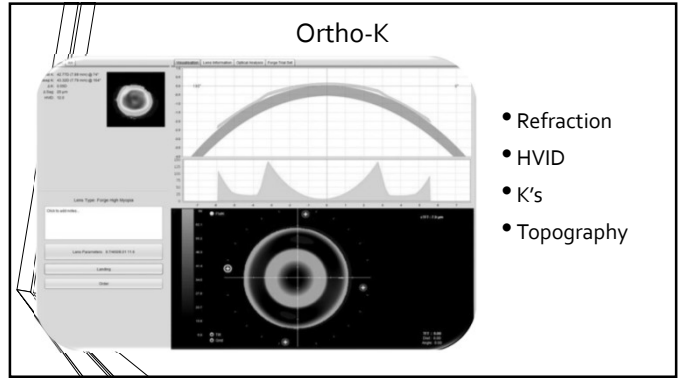
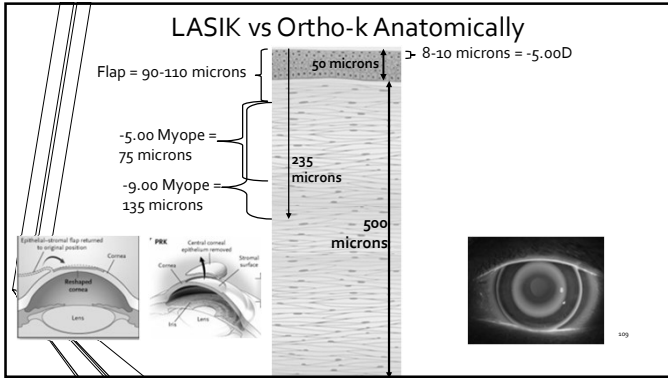


0.076 mm

Ortho-K



- NaFL not visible if tear lens is <20 microns



Orthokeratology (Ortho-K)

Paragon CRT

Forge

WAVE CONTACT LENS SYSTEM

NightLens

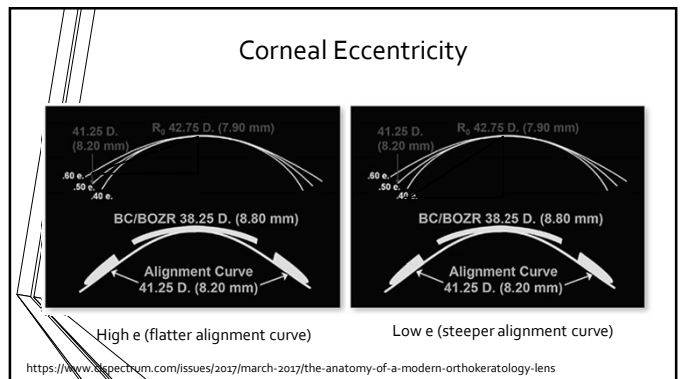
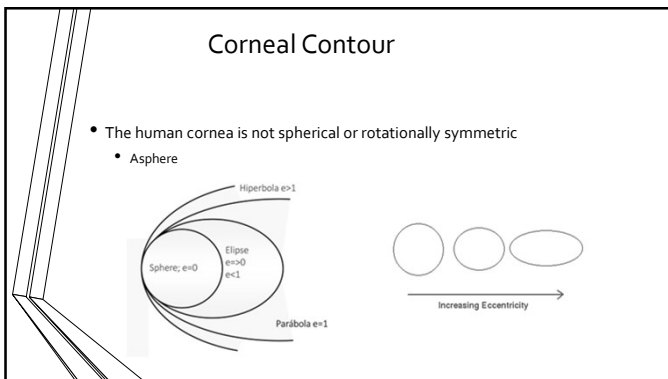
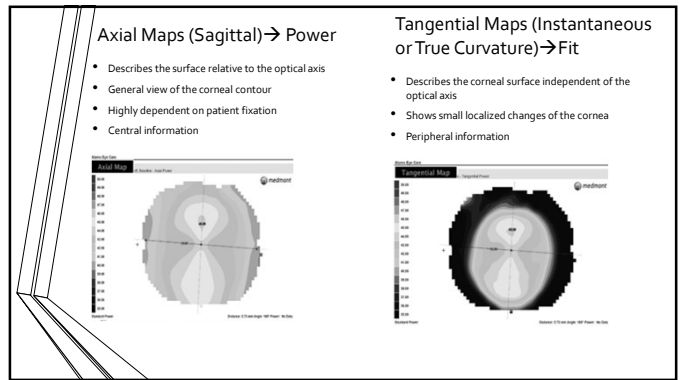
Euclid Emerald

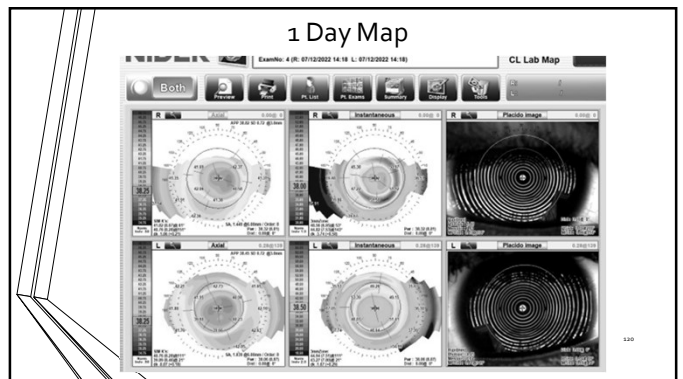
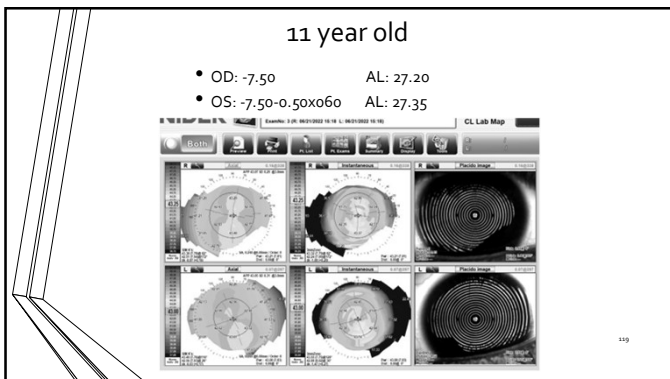
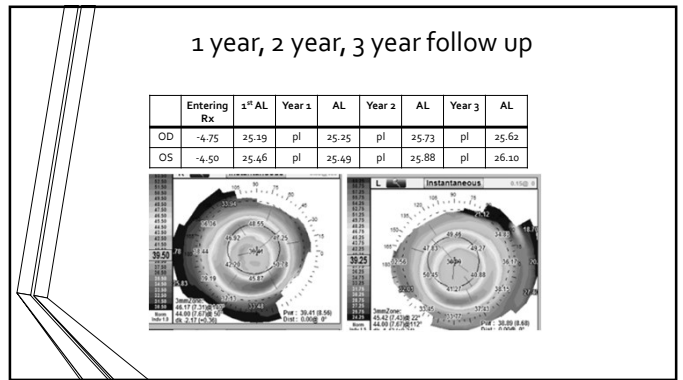
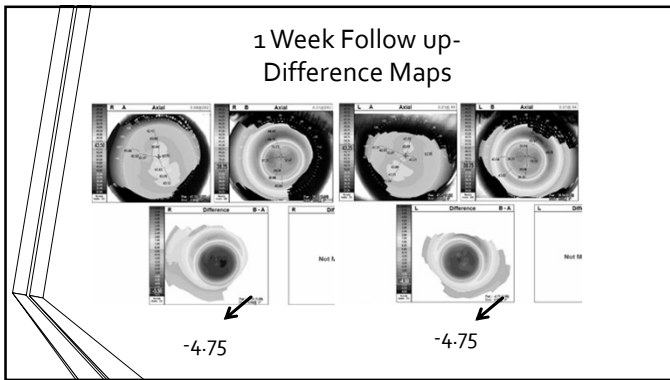
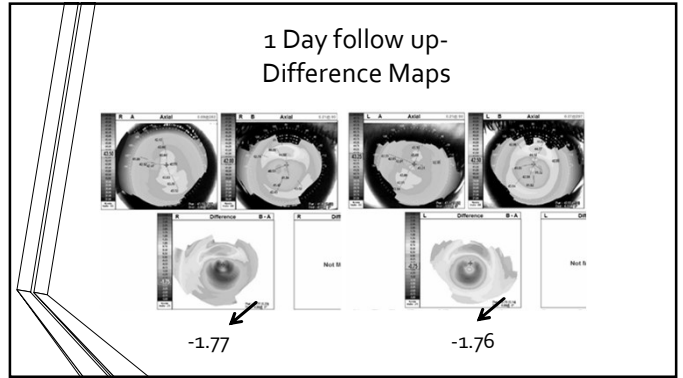
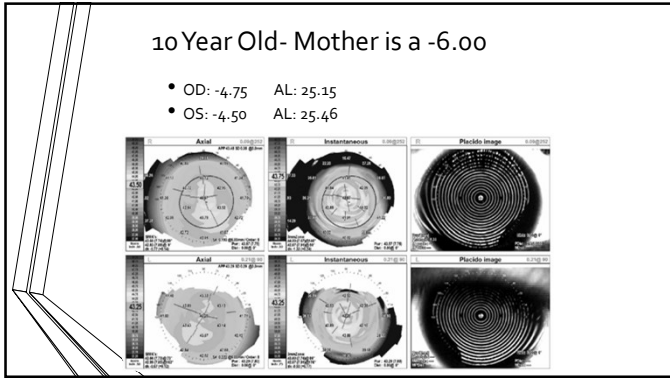
EyeSpace

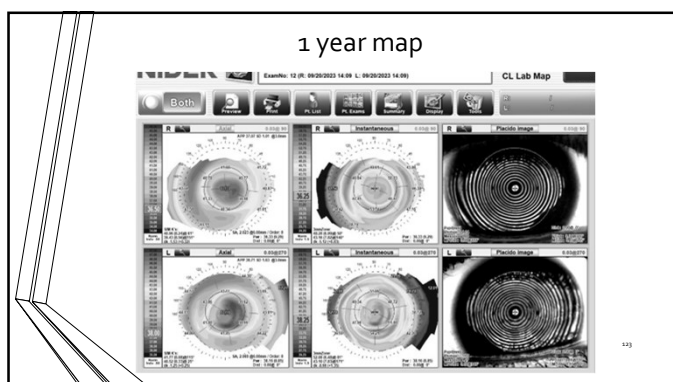
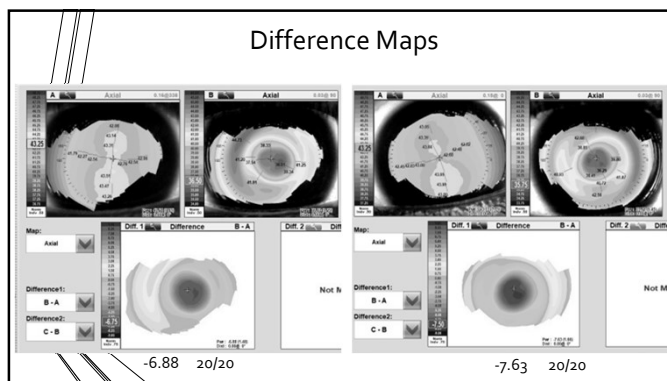
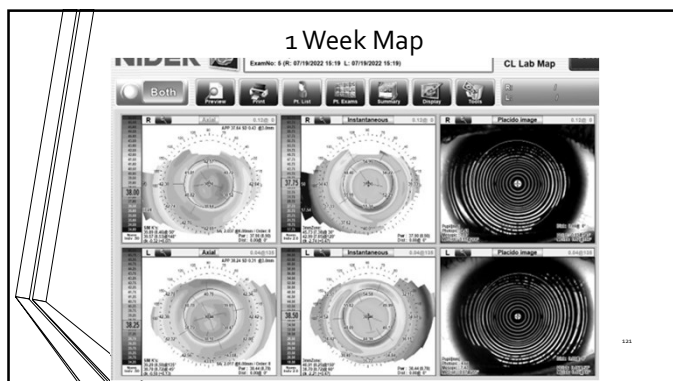
Johnson & Johnson

ACUVUE

abiliti







Ortho K Evaluation Schedule

- Year 1 follow up/evaluation schedule
 - 1 day
 - 1 week
 - 1 month
 - Every 3 months
- Year 2 follow up/evaluation schedule
 - Annual visit (we replace lenses every year no questions asked)
 - Every 6 months if progression has slowed to <-0.50D

When is my child done with treatment?

- **When they reach ocular maturity or are ready for Refractive Stability**
 - **No change in MRX of more than -0.50 in approx. 1 year**



What do you need to be Successful

- Patience because you already have patient's
- Handouts/Brochures/Website Information
- Informed consents
- A-scan
- Topographer
- Compounding pharmacy
- Soft Multifocal/ Dual Focus fit set
- Ortho-k fit set or training certification
- Staff Trainings

Step 10- The Pitch

Persistence against the Resistance

- You have a myopia clinic already ... Take the time and go after it
- Discuss pros and cons of treatment
- Don't get discouraged by a no
- Have both parents present at consult





Overtime- Be Ready for Questions!



Treating Myopia


- The perfect storm:
 - Genetics
 - Indoor vs outdoor time
 - Near work/computers/phones/tablets
 - Online schooling
- There is no cookbook approach as of yet
- FDA approved treatment for myopia management now are the MiSight Lenses and Abiliti ortho-k
- Look at each case individually to decide what is best for the child/parent/family



Current referral cycle

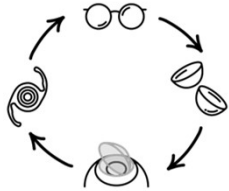
Pediatrician → Screening → Pediatric OMD

No Treatment
 Low Dose Atropine




Completing the circle of myopia management

- Pediatrician
- First pair of glasses
- Fitted with contacts (if right for the child)
- Interested in Refractive Surgery
 - LASIK (SMILE)
 - PRK
 - ICL
- Refractive Cataract Surgery
- Retinal specialist




Now What... Monday Morning

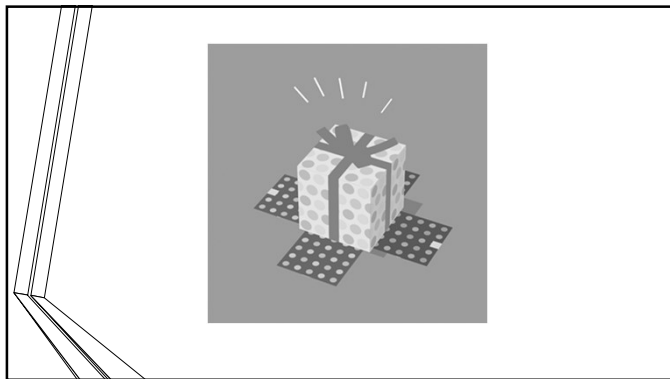
- Challenge yourself to be 1% better than you were coming to this meeting
- Staff Meeting- they want to know where you were and what you learned
- 1 year plan broken into 90 day focused sessions
 - Education-
 - Fee structure, staff training
 - Website, brochures, welcome kits
 - Find your tribe



Summary



- Do something!
 - Educate
 - Refer them out
 - Manage it
- Assess risk factors
- Discuss options
 - No cookbook approach (yet)
 - Decide treatment on patients wants and needs
 - Actively manage progression
- Don't dabble in Myopia Management!



Thank you!

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520.940.3081

