

# Can We Predict the Future Based on In-Office Clinical Observations?

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# Controversies in Prescribing

- There is “Magic” in the air!
  - “Micro prisms” – 1/8<sup>th</sup> diopter prisms
  - Yoked prisms
  - Postural prisms
  - Prisms prescribed by computer measurements - Neurolens
  - Fixation disparity compensation
  - Pieces of tape on lenses
  - Minus lenses OU for convergence issues
  - Under-compensation for myopia in single vision form (O’Leary)
  - Tints (FL41)

# Toe Walking – An Example

- AI Overview: Toe walking is the act of walking on the balls or tips of the feet and is common in toddlers, though many outgrow it by age 2. It can be a habit, or it may result from underlying issues like a tight Achilles tendon, certain neurological conditions, or sensory processing differences. Treatment for persistent cases includes physical therapy, stretching, bracing, serial casting, or in severe cases, surgery.

# Toe Walking – An Example

- Causes
  - Idiopathic
  - Shortened Achilles Tendon
  - Cerebral Palsy
  - Muscular Dystrophy
  - Autism Spectrum Disorder
  - Sensory Processing Issues
- Treatment Options
  - Physical Therapy
  - Bracing
  - Serial Casting
  - Botox Injections
  - Surgery

# Toe Walking – DOC List

- Going back to 2009 there are 135 threads on this topic.
- Yoked prisms the number one optometric intervention asked about.
  - *Will the prisms have a lasting result or just temporary for the toe walking?*  
4/19/2010
- Some interesting collateral negative noticed:
  - *I have a 3-year-old autistic boy who was very clumsy and a toe walker. I gave him 2^BD which immediately improved heel to toe walking. He happily wears the glasses and has obvious motor coordination improvement when they are on. Mom has also noticed that his attention span has reduced from 10-15 minutes (on a task like a craft) down to 1 minute at best. Anyone else notice a change in attention with yoked prisms decrease or increase?*

# Toe Walking – Some Sage Advice

- Initial post:
  - *I put 2 base down each eye on a 6-year-old, and she went down on her heals straight away. Mother is not really plussed as her grandmother and great grandmother are both still toe walkers.*
- One Suggestion:
  - *I would add +0.62 to the base down and see if this improves her stride length and eye movements compared to just base down alone. Walking on toes often is just a symptom of an overall vision dysfunction. Plus, often provides a more efficient organization quickly.*
- And another:
  - *I would not prescribe this for regular wear. In my experience they adapt quickly and go back to toe walking. It is useful as a habit breaker which is then combined with active visuo-motor therapy.*

# Toe Walking

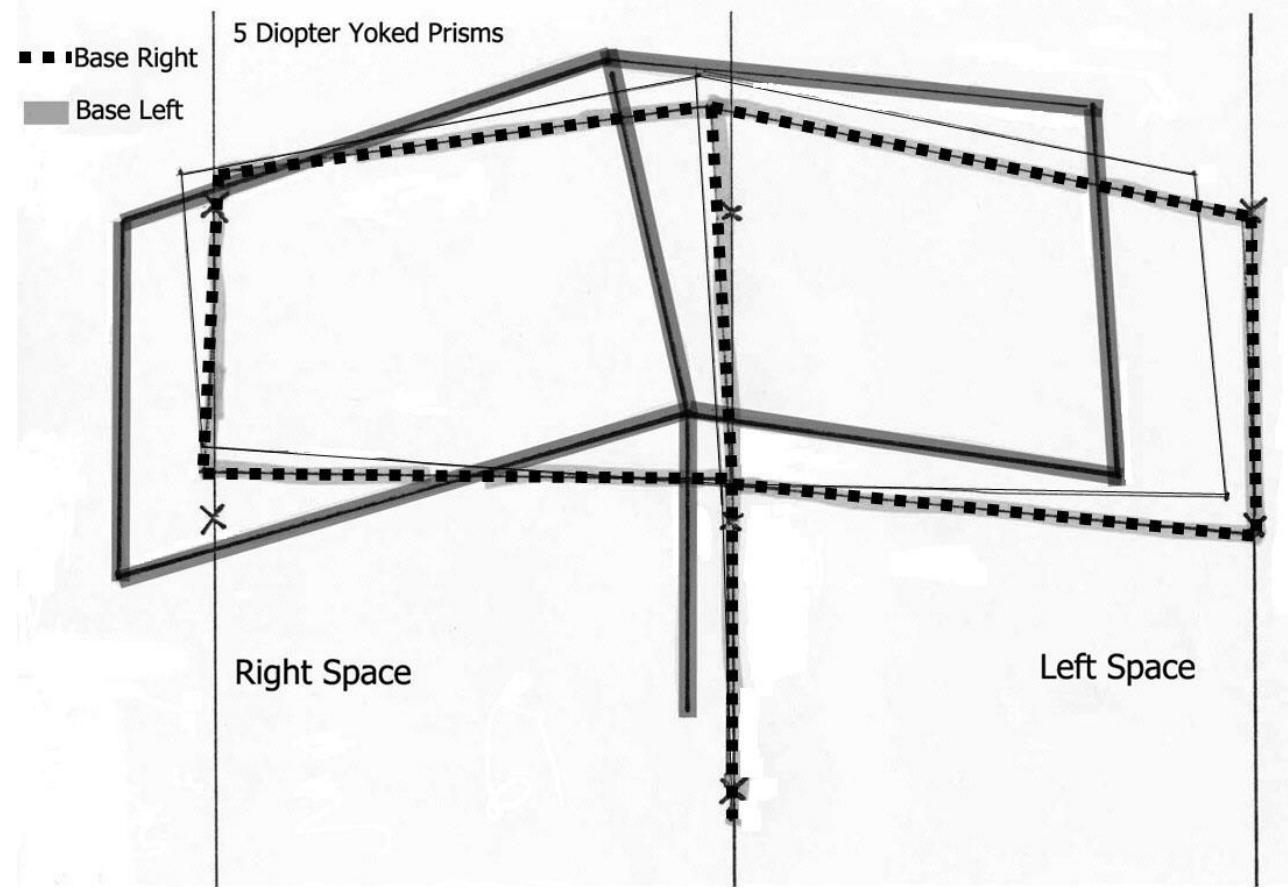
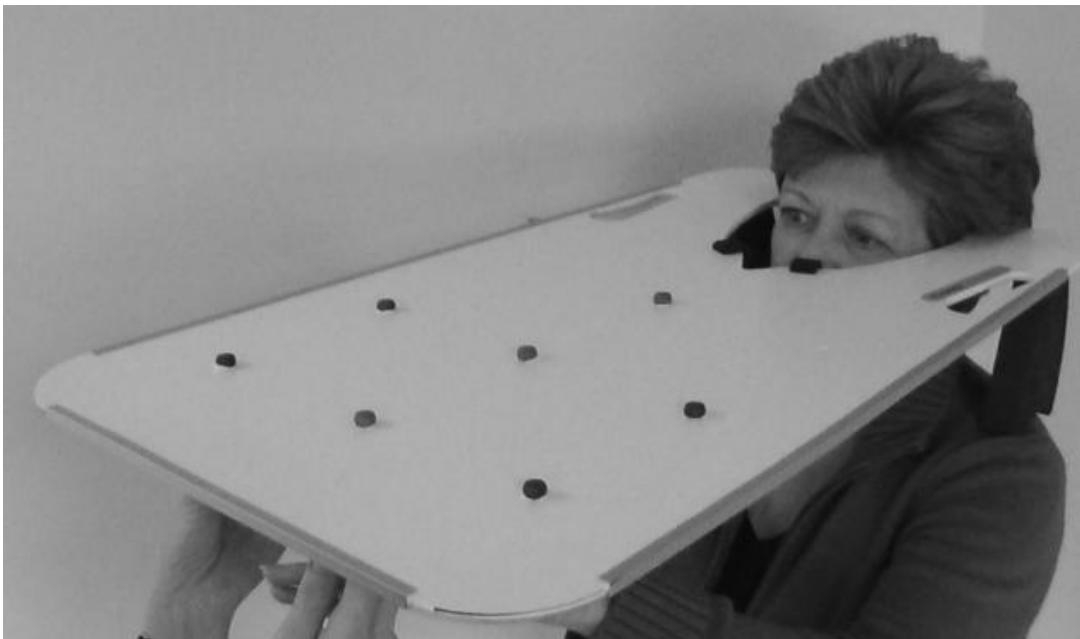
- IMHO, the best approach was put forward at this meeting, many years ago by Dr. Wendy Garson.
- She suggested having two pairs of yoked prism glasses, one with base up prism and the other with base down and to alternate their wear every couple of days.
- She explained their use as one pair shifting the person into extension and the other flexion and by shifting one to the other that it sets the stage for the person to reorganize their walking pattern to a more canonical one, which is with the heel strike and toe push off.

# Yoked Prisms The Return of the Kaplan/Kraskin Base Wars

# A Quick Summary

- Kaplan
  - Diagnosed by looking at performance characteristics: ex: Ball catching, eye contact, etc.
  - Treatment
    - Give the prism that improves performance
    - Give a small amount (1.5-2 diopters)
    - Worn for a long time (years)
    - Prism can creep up year after year
- Kraskin
  - Diagnosed with right vs. left phorias, observed posture, looked for differences with opposing base prism sets on stereo.
  - Treatment
    - Give the prism that decreases performance
    - Give a larger amount (3-4 diopters)
    - Worn for a short time (weeks to months)
    - Prisms are off once performance step being different with the probe pairs

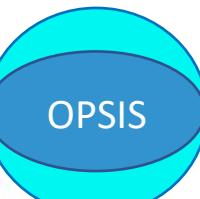
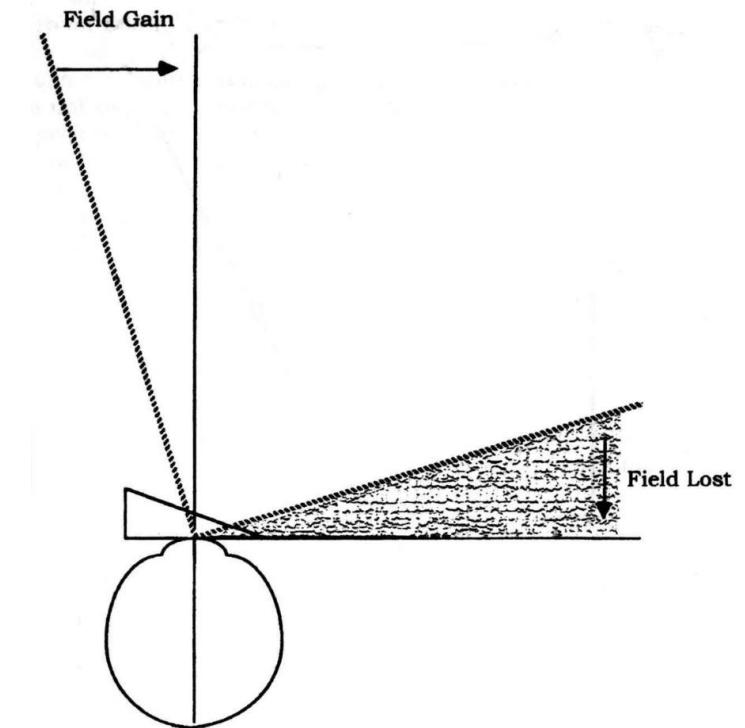
# The Space Board



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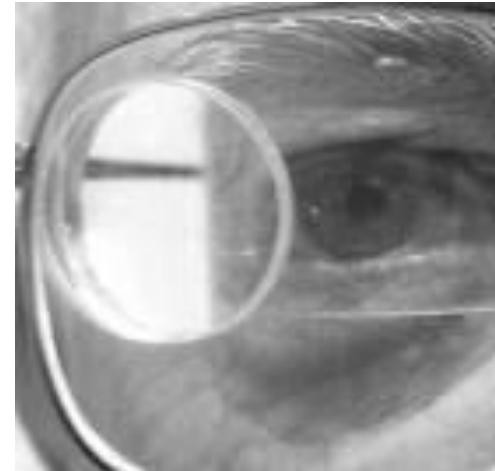
# Yoked Prisms

- We also saw other approaches to using yoked prisms.
  - Large amounts with gross postural skews. Remember the many videos of people walking hallways and the near magical changes with one pair or another.
  - Prisms used with various combinations of visual field cuts and/or spatial inattentions. The great debates of why base right vs. base left was the correct approach.



# Yoked Prisms

Prisms used with various combinations of visual field cuts and/or spatial inattentions. The great debates of why base right vs. base left was the correct approach.

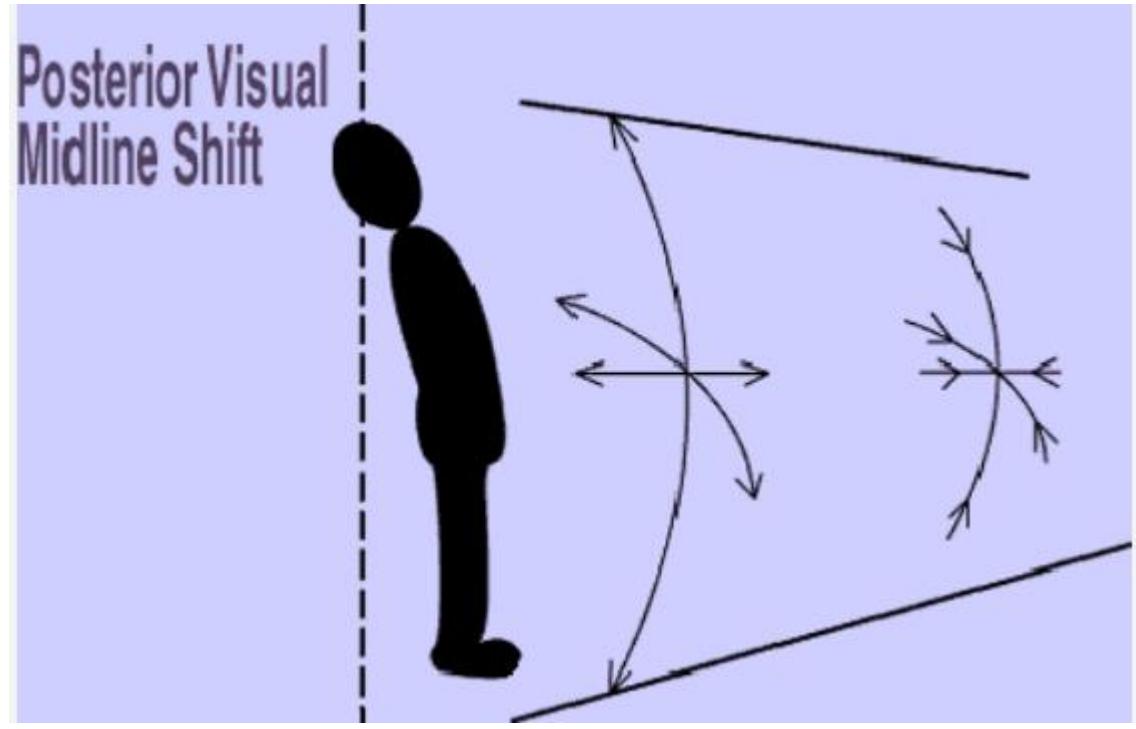
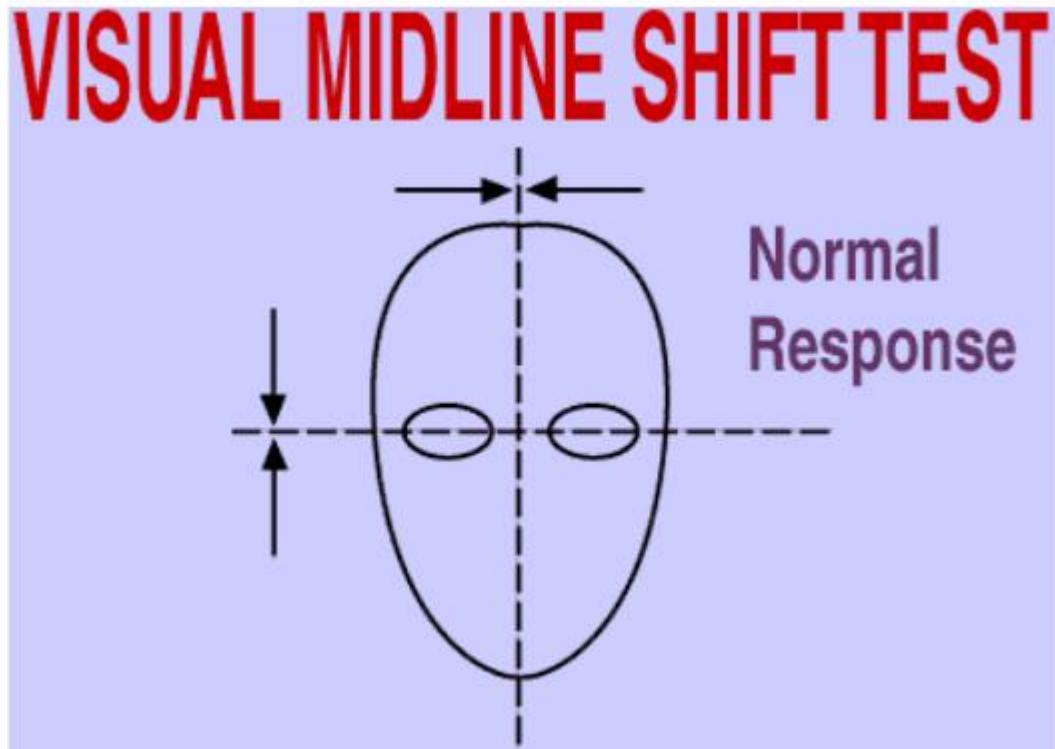


Peli prisms on the left  
and Gottlieb prism on  
the right.



# Yoked Prisms

- We also saw other approaches to using yoked prisms.
  - Attempts to modify “midline shifts” mostly caused by mild TBI or stroke.



# Yoked Prisms

- Midline shift treatment suggestions



Visual Midline Shift	Prism Orientation Apex (Expands space) Base (Compresses space)
• Right	Base Left
• Left	Base Right
• Anterior	Base Down
• Posterior	Base Up

# Yoked Prisms

- Kraskin was the only one who clearly presented what the follow up sequence should be and that the desired end result was the complete removal of the prisms.
- The rest seemed content to show us the magic and then leave us hanging in terms of what the follow up was.

# What about compensatory prism?

# Neurolens as an example

- From AI: Neurolenses are prescription eyeglasses that correct eye misalignment using a contoured prism, which is a special type of lens that helps the eyes work together more effectively. They are designed to alleviate symptoms of digital eye strain and other visual discomforts, such as headaches, eye fatigue, neck pain, and dry eyes. To get Neurolenses, an eye doctor performs a specialized measurement to determine a custom prescription, as these lenses are not a one-size-fits-all solution.

# Neurolens – How they work.

- **Correcting misalignment:** Neurolenses are designed to address minor eye misalignments that can cause symptoms but are not corrected by standard prescriptions for issues like nearsightedness.
- **Contoured prism:** The lenses include a contoured prism, meaning the prism strength varies across the lens to provide correction at all distances, not just at a single point.
- **Relieving strain:** By helping the eyes align properly, the lenses reduce the strain on the visual system and the trigeminal nerve, which is connected to the eyes and can cause pain when overused.

# Neurolens – My numbers from 2 different sites

**9/6/2023 10:54 AM**

## Binocular Alignment

Neurolens Value Convergence Excess  
Distance # 1.89Δ EXO  
Distance PD 62.61mm  
Distance OS PD 32.78mm  
Distance OD PD 29.83mm  
Distance MQI 1.00  
Near # 1.73Δ EXO  
Near MQI 1.00  
AC/A # 6.27 Δ/D

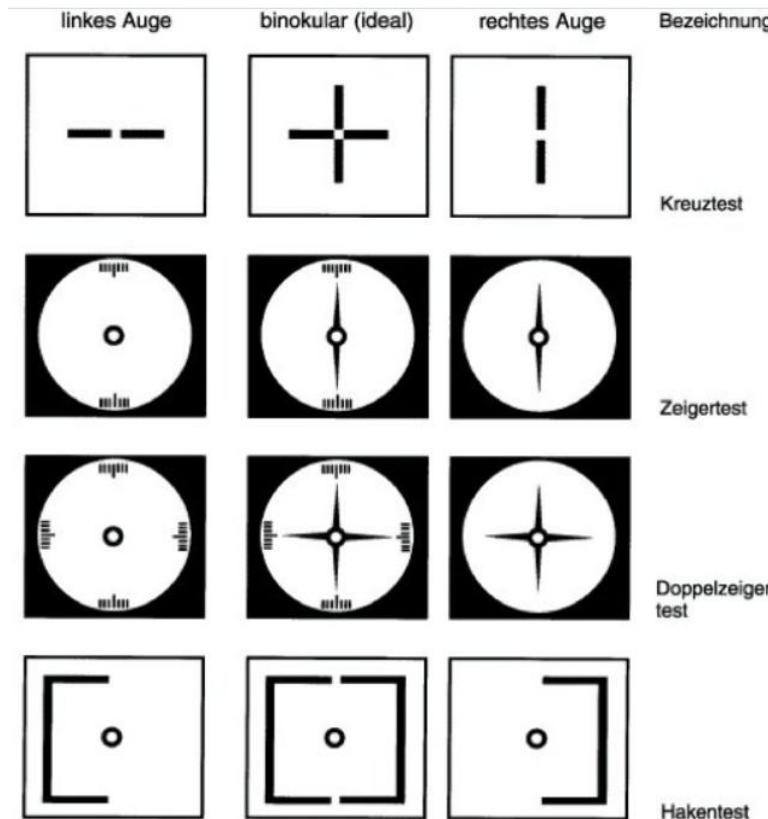
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## Binocular Alignment

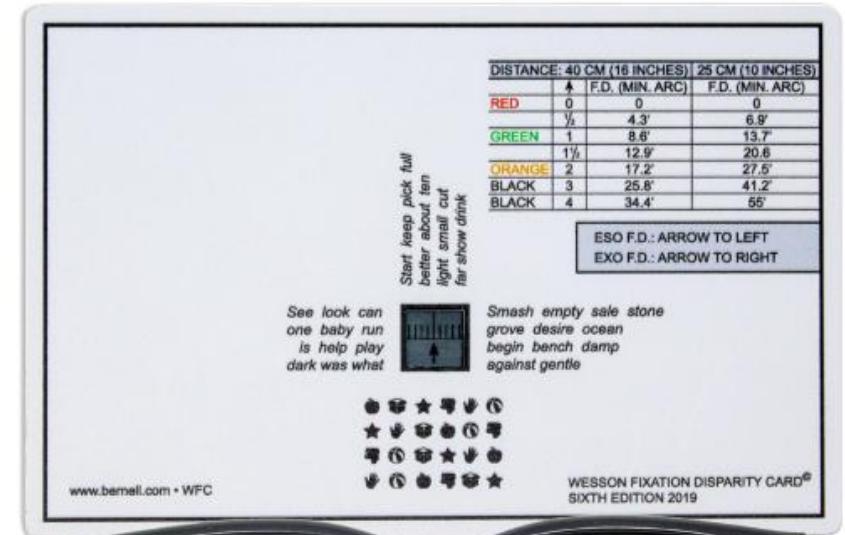
Neurolens Value 1.4 BI  
Distance # 1.89Δ EXO  
Distance PD 62.38mm  
Distance OS PD 32.14mm  
Distance OD PD 30.24mm  
Distance MQI 1.00  
Near # 3.15Δ EXO  
Near MQI 0.86  
AC/A # 5.44 Δ/D

# Fixation Disparity / Associated Phoria

## Pola Test



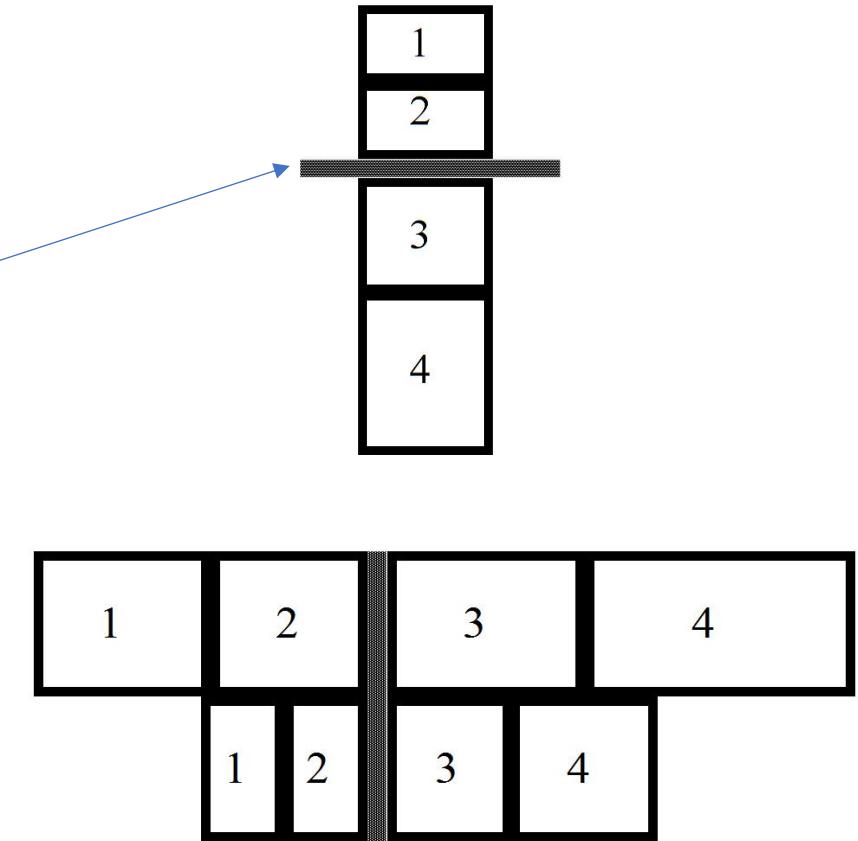
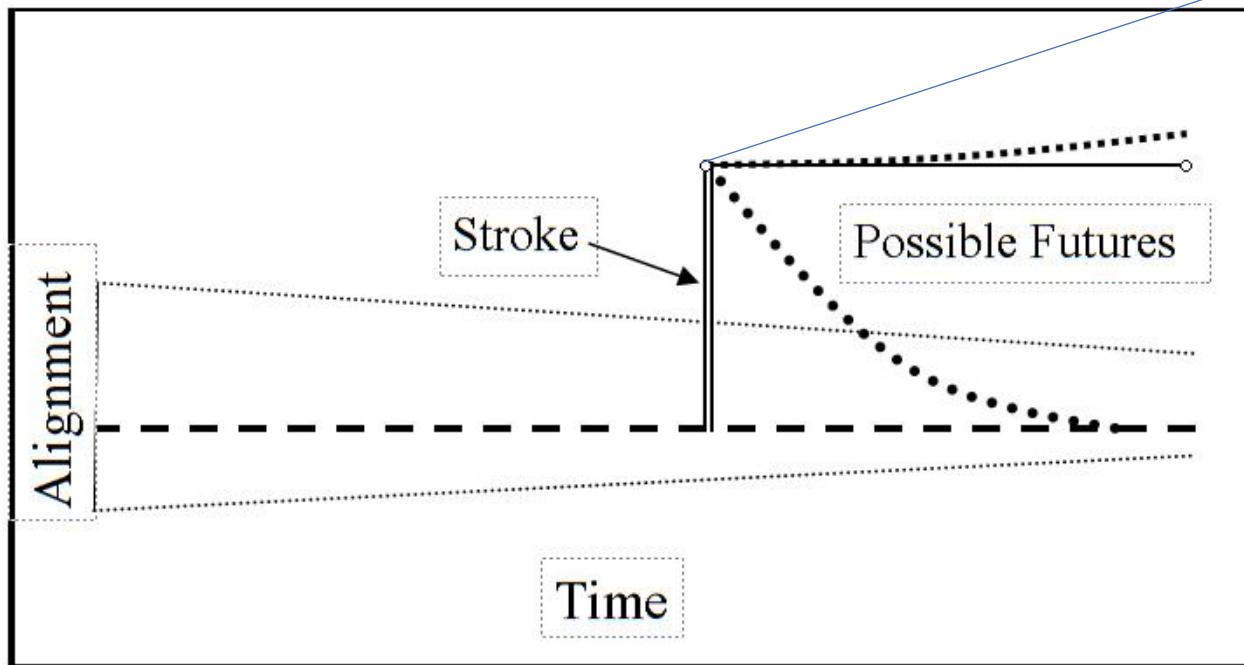
## Wesson



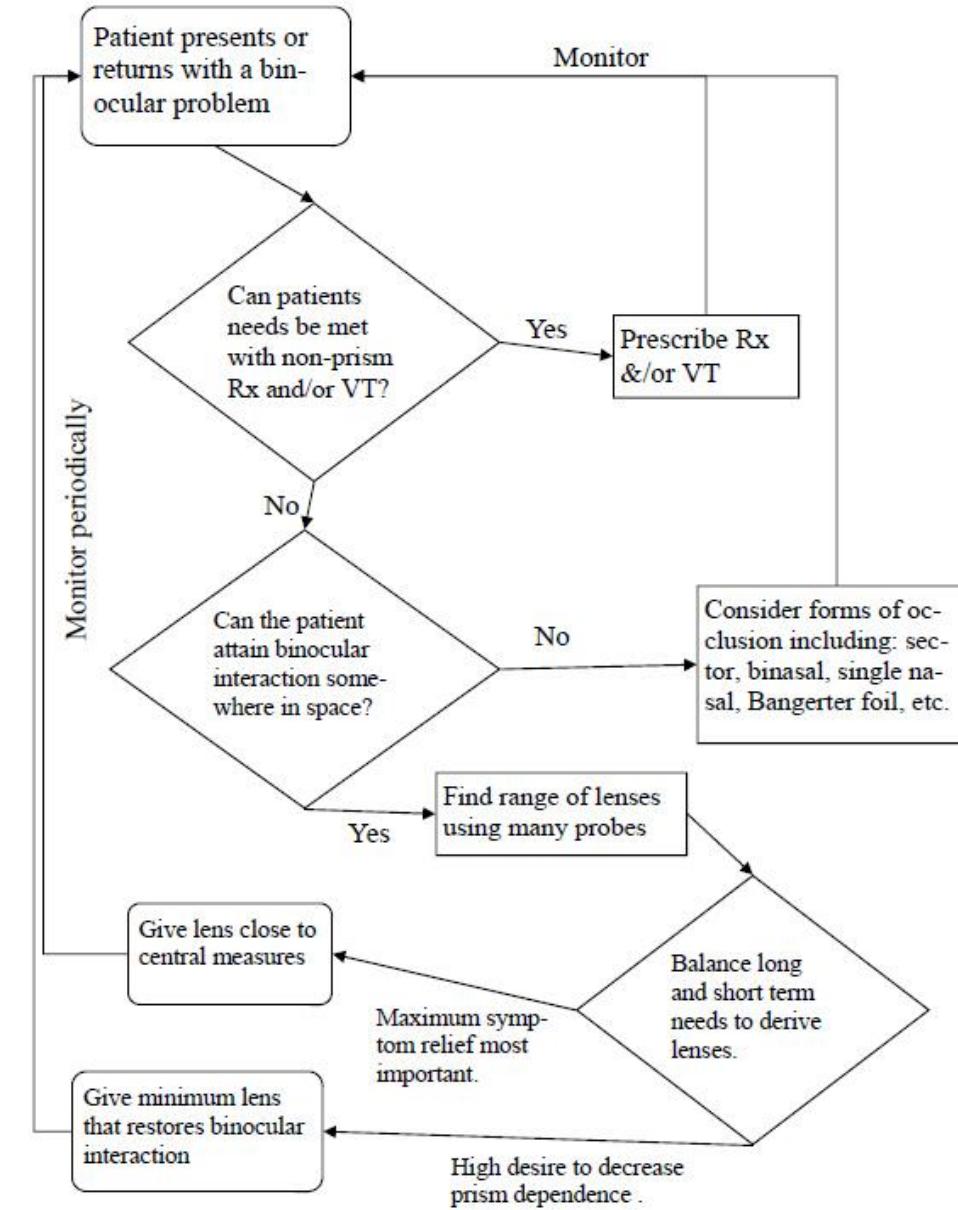
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# Lens Types – Based on Futures

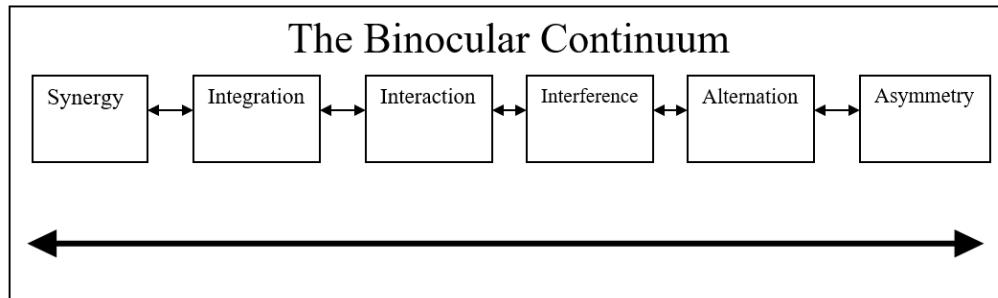
- Stabilization vs. Guidance
- Different futures



## Alignment Prism Prescribing Decision Tree



### The Binocular Continuum



From book chapter in Visual Rehabilitation by Paul Harris

# What about tints?

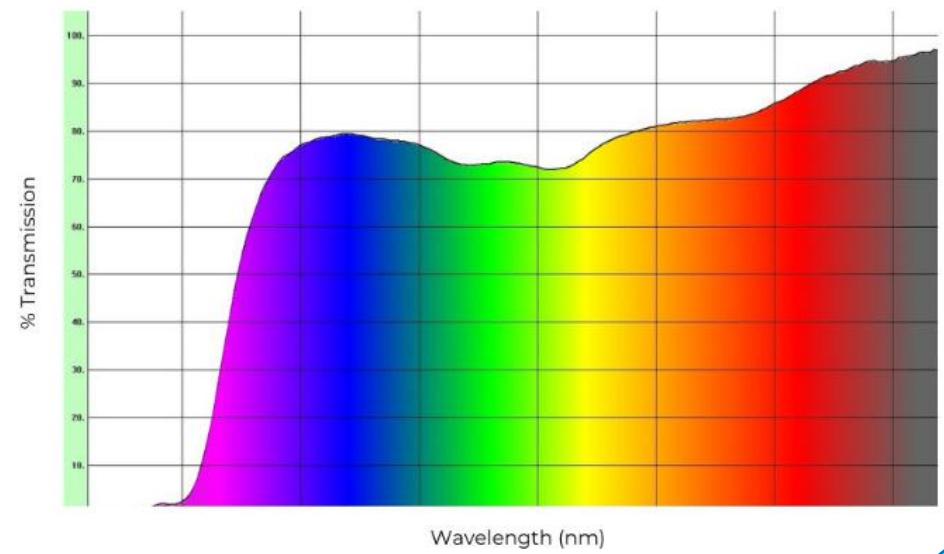
# What's so special about FL 41?



test

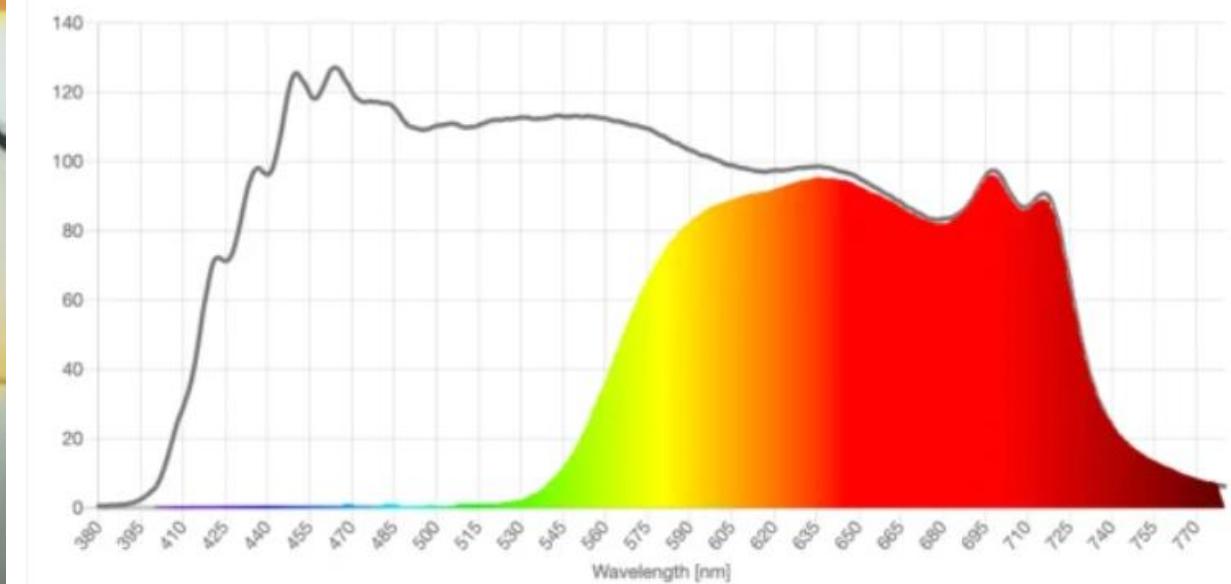


Spectrophotometry Graph



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# What happened to BluBlockers?



# Or the Intuitive Colorimeter?



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# Or the Therapeutic Color Indicator?



## TARGET TYPE



AND

## FILTER SET



START

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# Question for the Group

- Can we predict what will happen when we prescribe a lens that seems to be helpful in the exam chair?
- Are lenses which bring about immediate observable improvement in performance in the office the right one to prescribe?
- What should follow up look like and what expectations should we have for these patients?

# Thank you and Q&A

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