

Vision & Posture: More Questions than Answers

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Introducing: Michal Niedzielski, PT

Sometimes we don't know what we know...

- I received a call from a Physical Therapist who was seeking a willing collaborator.
- He had been traveling 3.5 hours to share office space with a dentist in Manhattan 2 days per month.
- She specializes in Dental Airway Wellness.
- He was looking for an optometrist with an interest in the effect of lenses on posture and movement, to help the patients who needed visual intervention.

Sensory information in Body Organization

- Holistic dentistry considers how individuals use their teeth to process sensory information.
- Much of this is unconscious.
- A great deal of our visual input is processed unconsciously as well.

Sensory information in Body Organization

- Our collaboration, Physical Therapist, Behavioral Optometrist, and Holistic Dentist, has been helping a number of shared patients.
- On this occasion, I put myself in the role of patient for Physical Therapist, Michal Niedzielski.
- We explored the impacts of several lens prescriptions on the physical body.
- Our surprising discoveries were all captured on video.

Some of the questions arising out of our journey...

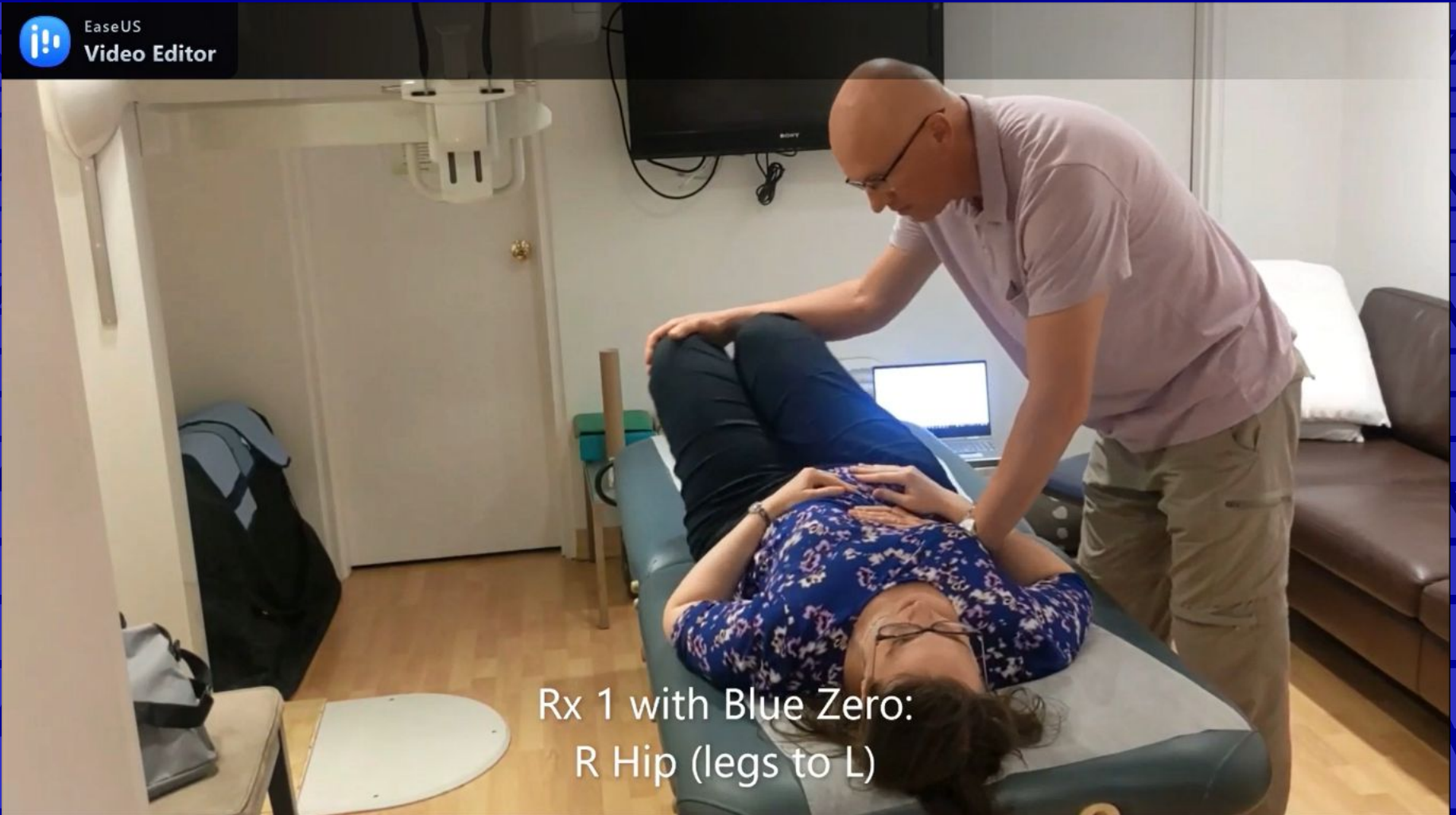
- How do glasses make one feel?
- How does light impact the physical body?
- Do filters and coatings change the effect of a lens prescription?
- Does eye posture impact body posture?

Are Blue Light Filters really beneficial?

- Blue light filters are being offered to patients at every optical purchase.
- They have been taken for granted as an add-on purchase.
- Some wonder whether they have any real effect, or are just placebo.
- Some feel a subjective change.
- This next video presents some surprising food for thought...



EaseUS
Video Editor



Rx 1 with Blue Zero:
R Hip (legs to L)

Are Blue Light Filters really beneficial?

- The only difference between the glasses and the trial frames was the blue light filter coating!!
- Are these optical choices best left to the patient?
- Or to the recommendation of an optician?
- Do we know what we are actually prescribing when we prescribe them?
- What other lens aspects may we be prescribing without understanding their impact?

Instant effect on posture & movement

- The next video displays some salient differences in body movement, all explored minutes or even seconds apart.
- The four conditions shared are:
 1. Intermediate Vision (IV) Rx with Blue Zero (BZ) filter
 2. No Rx
 3. Trial Frame of IV Rx (no BZ filter)
 4. Trial Frame with Low Yoked Cylinder Rx

Blue frames: Blue Zero filter

- Rx used:
- Blue Zero – blue light filter
 - OD +0.75 sph
 - OS pl sph = $\frac{1}{2}^{\wedge}$ BD (OS only)

No Rx

- Current Refractive state:
 - OD +0.12 sph
 - OS -1.25 sph

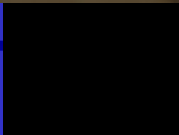
Trial frames: IV Rx, no filter

- Rx used:
 - OD +0.75 sph
 - OS pl sph = $\frac{1}{2}$ ^ BD (OS only)

Trial frames: Low Yoked Cyl

- Rx used:
 - OD +0.75 -0.25 x 090
 - OS +0.25 -0.25 x 090

PT Assessment: Low Yoked Cyl



Questions about the assessment?

Refractive Sculpting: Structure the Field with Non-Compensatory Cylinder

- Even patients with spherical Rxes may benefit from the yoked effects of subtle cylinder:
 - -0.25 DC x 090 OU: Enhances binocular fusion
 - Narrows field
 - Creates the functional equivalent of WTR astigmatism!
 - -0.25 DC x 180 OU: Enhances awareness of horizon
 - Can support head-leveling and near/far transitions.
 - Creates the functional equivalent of ATR astigmatism!
 - ***Explore impact on standing, gait and head posture.***
 - ***Retest stereoacuity to validate impact.***



Effect of x 090



Effect of x 180

Epilogue

- I've made those low cyl trial frames into glasses.
- They help relieve neck tension (from a tendency to tilt the head).
- Although they are less clear at distance than my naked eyes, they are far more comfortable.
 - I prefer to drive with them on!
- It instantly enhances my sense of space and volume.
- When standing, my weight shifts back when I put the lenses on; when I remove them, my weight shifts forward to the balls of my feet, and I feel a palpable compression of space.

Epilogue

- With the enhanced binocularity and reduced tension, I no longer feel the need to wear the BZ IV Rx depicted above (which I had made up for retinoscopy).
 - OD +0.75 sph
 - OS pl sph = $\frac{1}{2}$ ^BD OS only
- Remarkably, I even stopped wearing my computer and reading glasses!
 - OD +1.50 sph
 - OS +0.25 sph = $\frac{3}{4}$ ^ BD OS only

Closing Questions?

Thank you for your time.

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