EXPERIENCE EXPO WITH US!

VISION EXPO | NYC 2024
EDUCATION: MARCH 14-17
EXHIBIT HALL: MARCH 15 - 17
JAVITS CENTER | NEW YORK

- Innovation Stage - *Exhibit Hall – The Bridge (Booth P1055)*
  Our Innovation Stage sessions feature free, promotional content for all attendees.

- Vision Series - *Friday, March 15 and Saturday, March 16*
  Grab a bite to eat or drink and continue learning over breakfast or lunch!* Listen to industry leaders as they address the latest clinical innovations in a relaxed and collaborative environment.

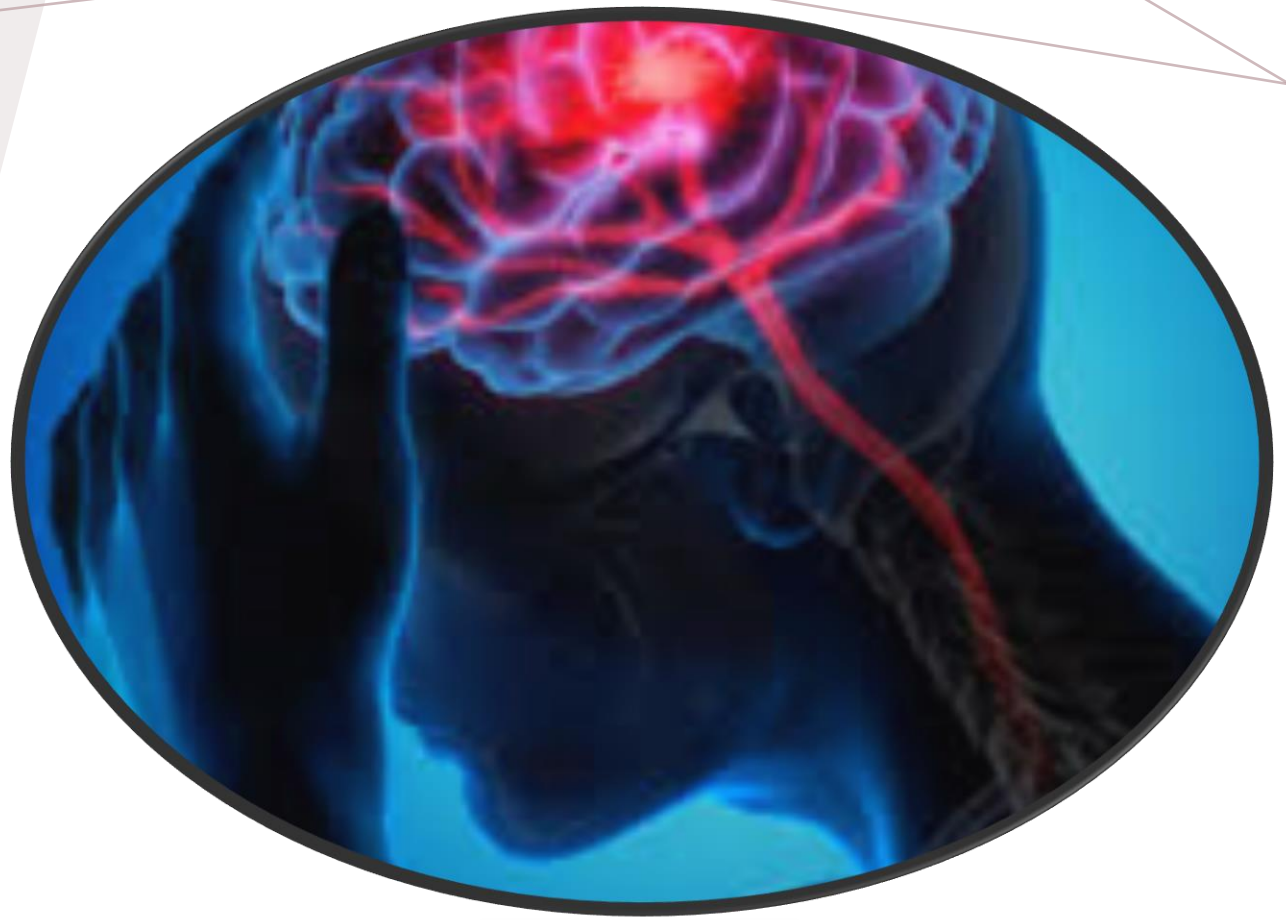
  **Open to Optometrists only. Not for Credit. Meals offered on first-come, first-serve basis to pre-registered attendees.*

- Exhibit Hall Hours

Friday, March 15	9:30am – 6:00pm
Saturday, March 16	9:30am – 6:00pm
Sunday, March 17	9:30am – 3:00pm

I COULD HAVE TREATED THAT!

DEVELOPING A HEADACHE CLINIC



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Disclosures:

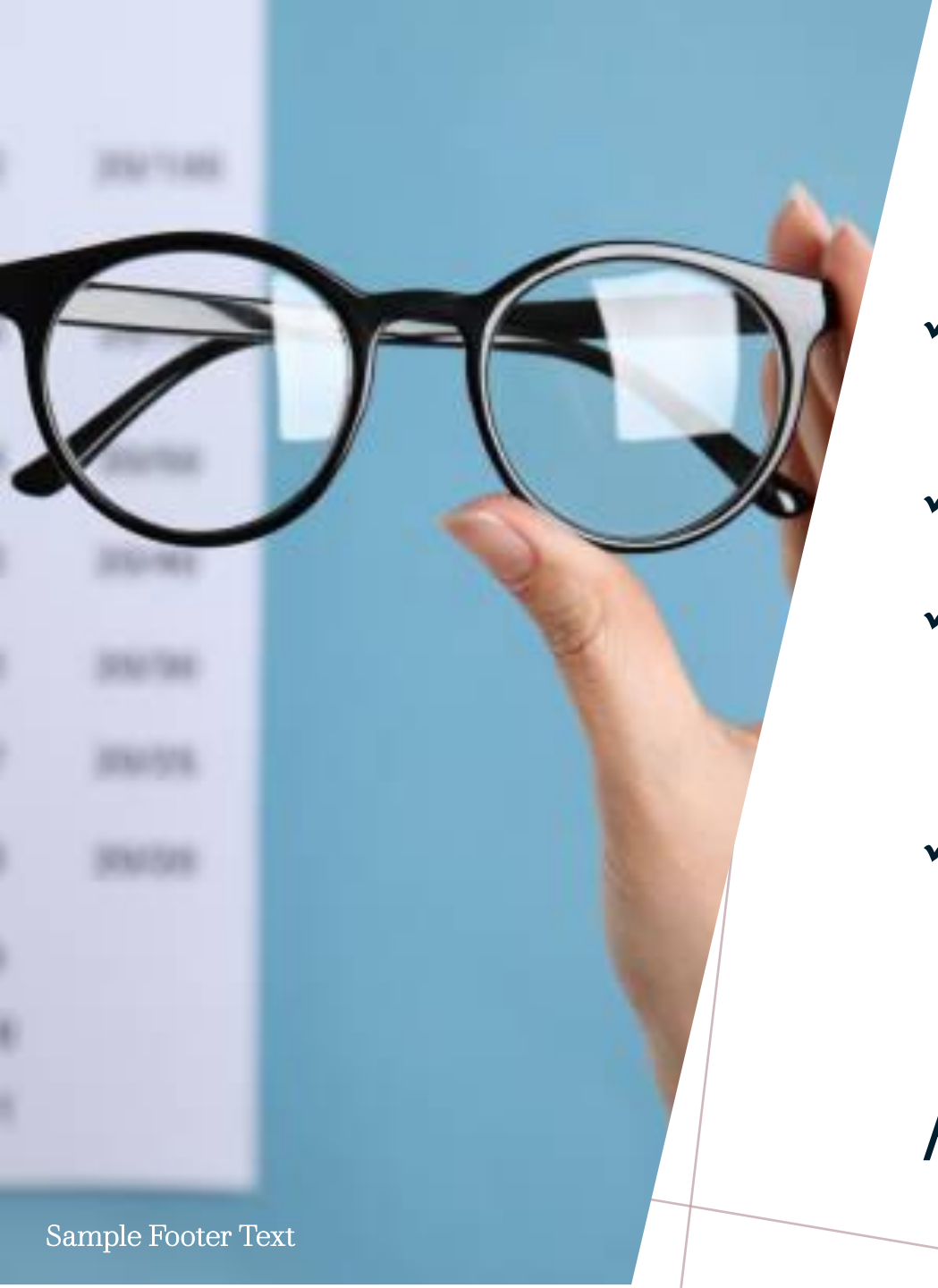
Faculty, Advisory Board Member or Speaker:
Alcon
Allergan
Neurolens
ABB
Thermamedx

Partner: Sports Vision Pros, LLC
No conflicts with this COPE Presentation

A LITTLE ABOUT DR NANASY

FLORIDA INSTITUTE OF SPORTS VISION

- Director, Florida Institute of Sports Vision
  @The Eye Center
  @Holy Cross Sports Medicine
- **Team Doctor**: Miami Dolphins, Inter Miami CF, Miami HEAT Check Gaming, UCF, Barry U, St. Thomas U, American Heritage, St. Thomas Aquinas Athletics
- **Preferred eye care provider**: Joe Dimaggio Children's hospital Orthopedics, Holy Cross Hospital, FORCE Physical Therapy, Pinecrest Academy Athletics
- My professional goal……



GOALS FOR TODAY...

- ✓ Understand how to gather the appropriate histories of a headache patient.
- ✓ Develop a headache testing protocol
- ✓ Understand why specific testing and measurements can help assist in your headache treatment plan.
- ✓ Gain knowledge of how primary care optometry can assist in team approach treatment with other specialists

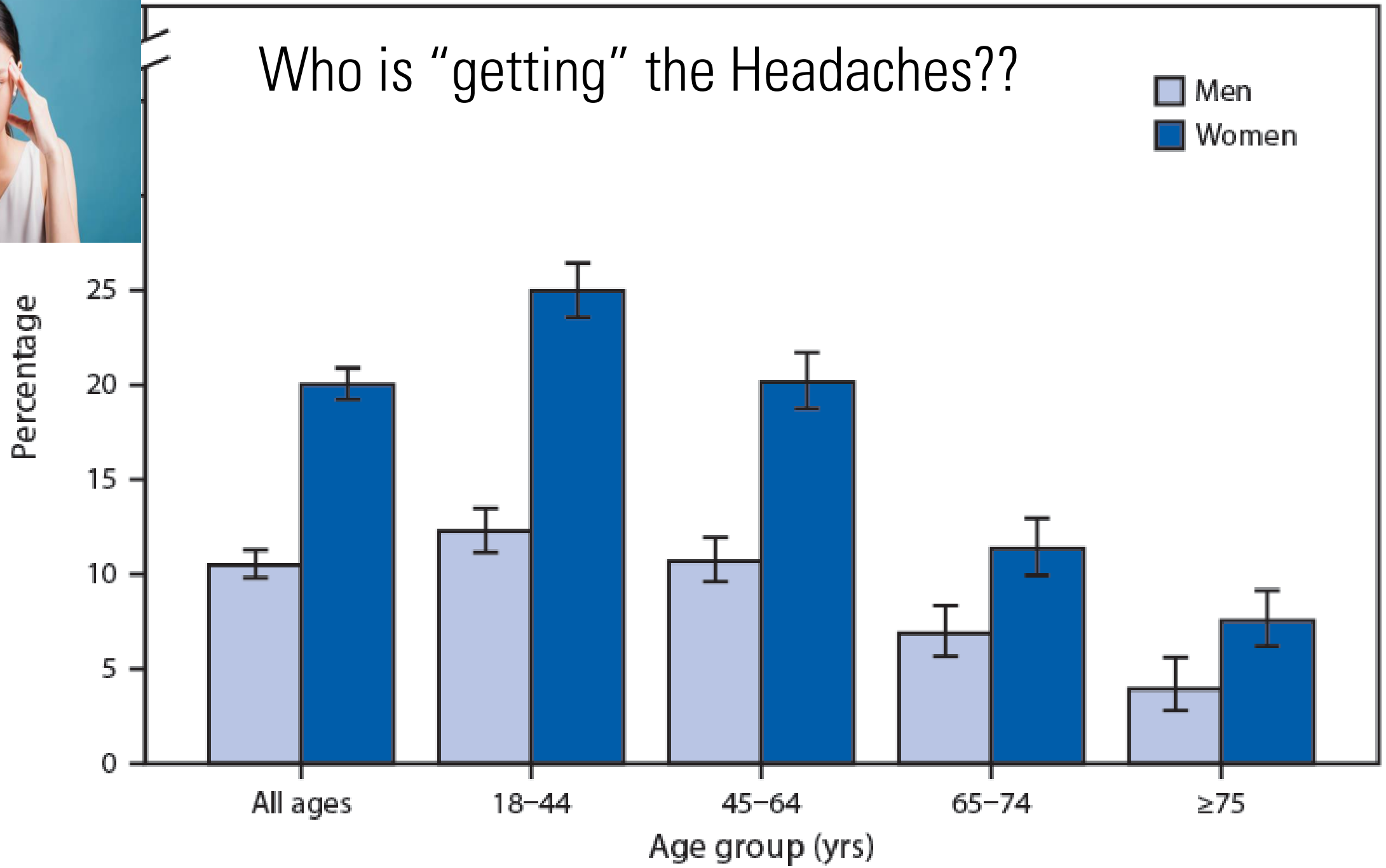
Help patients in ways you never imagined.

WHY CONSIDER DEVELOPING A HEADACHE CLINIC?

52%

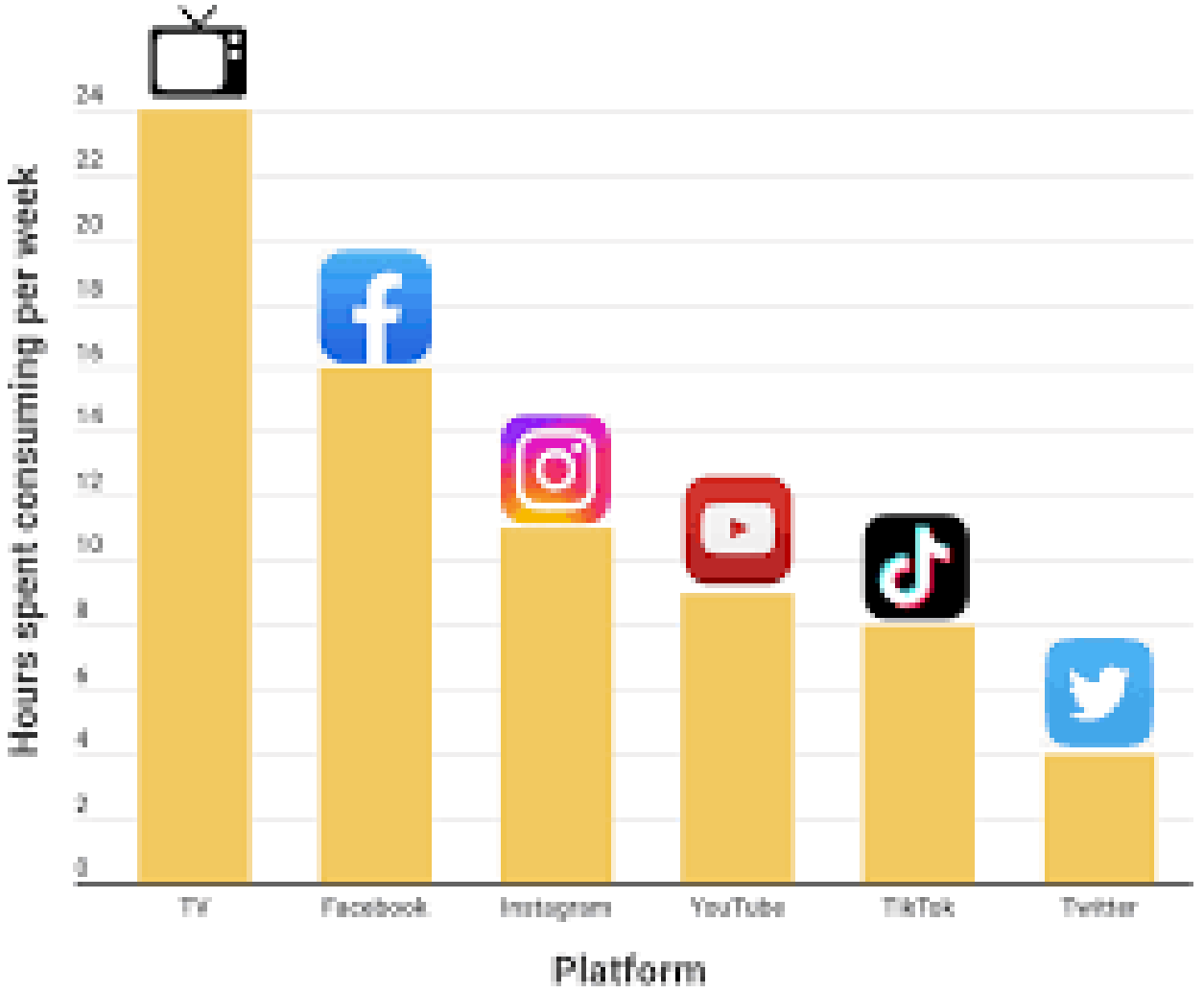
UNCORRECTED REFRACTIVE ERRORS AND BINOCULAR VISION CONDITIONS ARE THE MAJOR CAUSES OF VISION-RELATED HEADACHES.[5]

Who is “getting” the Headaches??



Guess the average number per day…….

144 looks per day



Average over 11 hours per day on digital devices

MY PERSONAL HEADACHE STEPS…

1. **Document S/S so I can decide**…
    1. Do I need to refer/ share documents with another provider?
    2. Is this something potentially urgent?
    3. Can I potentially help them reduce Has?
2. **Fill in the Plan**
    1. Make sure to include the follow up plan that includes what they need to do if HAs continue
    2. Schedule follow up 2-3 weeks after wearing new glasses if I think I can help.
3. **Follow up**
    1. If they are not doing better OR IF THEY ARE, document and send notes to PCP.

2 MAJOR CATAGORIES

Primary headaches: describes head pain due to the headache condition itself, and not a result of another cause. The three common types of primary headache

Migraine

Tension

Cluster.

Secondary headache: is one that is present because of another condition (ie: sinusitis)

1. Headache classification committee, International Headache Society. Classification and diagnostic criteria for headache disorders, cranial neuralgias, and fac
[PubMed] [Google Scholar]

2. Rasmussen BK, Jensen R, Schroll M, Olesen J. Epidemiology of headache in a general population – a prevalence study. J Clin Epidemiol. 1991;44:1147–57. [P

Don’t ask a question if you don’t know what to do with the information

- . Key Questions:
  - Since how long have you been having headaches?
  - Where in the head does it pain and how does it radiate?
  - How often does the head pain?
  - How long does each attack last? Is it short-lasting or long-lasting?
  - How severe is the pain?
  - What type of pain is it? What is the Nature of the pain?
  - What factors can precipitate or worsen the headache. Are there any triggering or relieving factors?
  - Are there any accompaniments to the head pain?
  - Ask for any visual or sensory aura?
  - Ask if there is just one type or more than one type of headache?
  - Ask if the headache is precipitated or significantly worsened by the Valsalva manuver? Ask if there is worsening with sexual intercourse? Ask if there is postural worsening?
  - Ask about the personal history, habits and occupation?
  - Ask for a family history of headaches?
  - Ask about the impact of the headache on the patient's lifestyle?
  - Ask about medication overuse?
  - Ask about investigations that have been done so far? And the treatment that has been taken so far?
  - Ask if there is anything else that the patient wants to tell you? Ask if there are any other complaints or medical problems?
  - “Is there anything that you wish to tell me which you think I have not asked you?”

If you do not know what you are looking for, you are not going to find it.

TYPES OF HEADACHES

Concussion Headache

Characteristics: Following a concussion, you can develop a headache that resembles a migraine headache. **Pain tends to be in the front of the head area of your forehead or temple.** It is commonly described as a 'pounding' or 'throbbing' pain. It is sometimes associated with nausea and sensitivity to light and noise.

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Tension Type Headache

- Bilateral squeezing headache
- Rare nausea/vomiting
- No light or sound sensitivity
- Better or no change with activity
- Mild to moderate
- 60-80% of population, most common

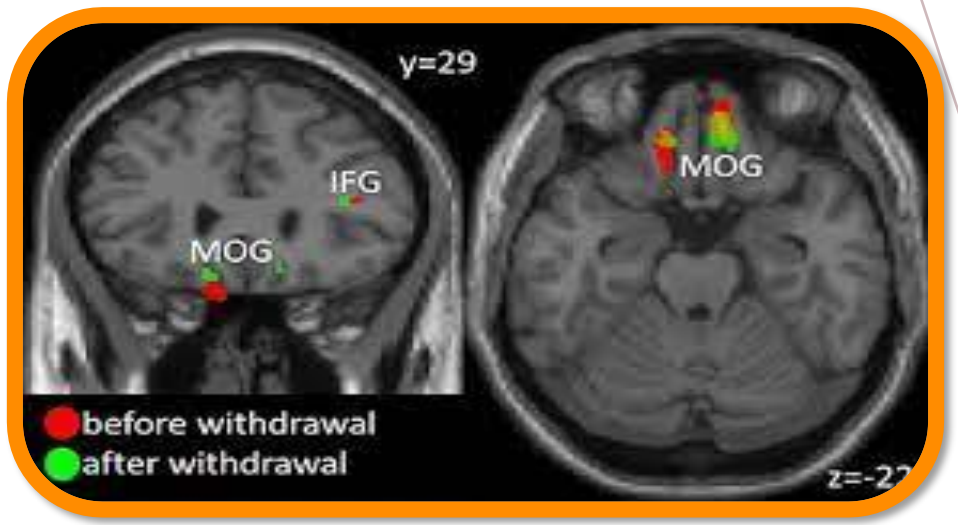
The vast majority of short-duration headaches belong to a specific category of headache disorder termed 'trigeminal autonomic cephalalgia' (TAC).

Triggers may include:

Stress
Depression
Anxiety
Computer Posture
Sleeping in an awkward position or in a cold room
Eye strain
Drugs or alcohol
Fatigue
Overexertion
Skipping meals
Head or neck injury, even years after the injury
Clenching your jaw or grinding your teeth (bruxism)
Medications, leading to rebound headaches
Arthritis
Hormonal changes

Medication Overuse Headache

- Diffuse dull ache, pressure or discomfort
- Non throbbing
- No nausea/vomiting
- No light or sound sensitivity
- No change with activity
- Common HA waking you in the early morning
- Mild



Epidemiological data suggest that up to 4% of the population overuse analgesics and other drugs for the treatment of pain conditions such as migraine

Migraine without Aura

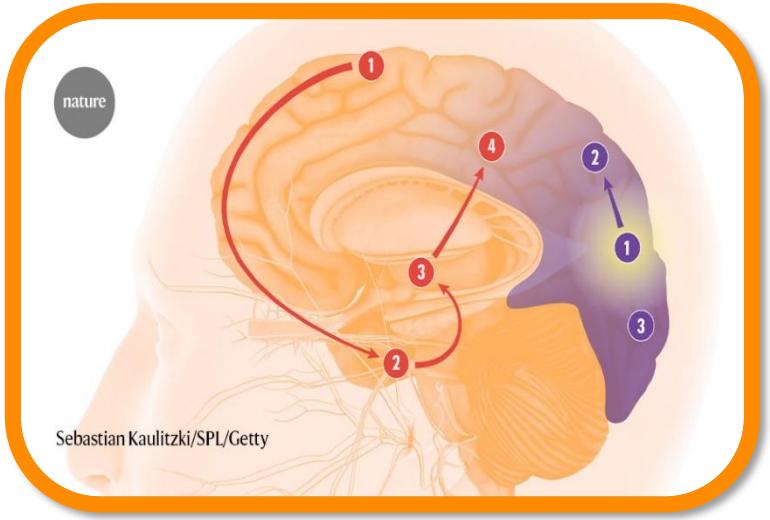
- Unilateral
- Throbbing
- Nausea/vomiting
- Light and sound sensitive
- Worse with activity
- Severe
- Last 4-72 hours untreated
- 15% of population

The idea that dilation of cerebral vessels is a primary cause of migraine pain has been challenged by a variety of evidence. However, the "trigeminovascular system" continues to be widely accepted as an important component of the headache.

Triggers: Complex of **stress**, anxiety, hormonal changes, bright or flashing lights, lack of food or sleep, and dietary substances.

Migraine with Aura

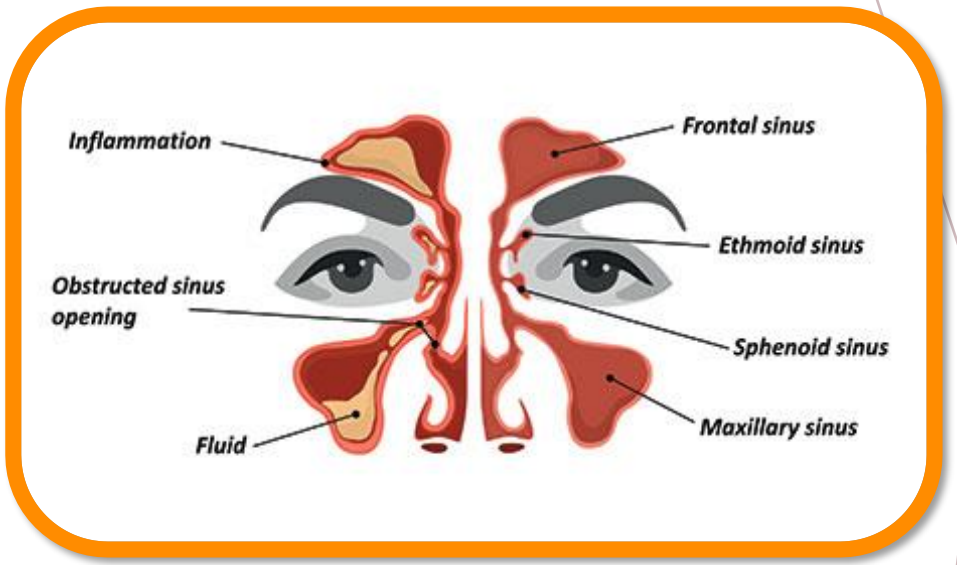
- Reversible neurologic symptoms that are fully reversible, 30% of migraine sufferers
- Usually last 20-30 minutes
- Can be visual, unilateral numbness, unilateral weakness or dysphasia
- Blind spots (scotomas)
- Zigzag lines that gradually float across your field of vision; shimmering spots or stars; flashes of light
- Changes in vision or vision loss
- Differential diagnosis: stroke or retinal tear



Migraine-specific therapies such as triptans, ditans, and gepants and other treatments such as neuromodulation.

Sinus Headache

- Pain, pressure and fullness in your cheeks, brow or forehead
- Worsening pain if you bend forward or lie down, worsens with activity
- Stuffy nose
- Fatigue
- Achy feeling in your upper teeth



Sinusitis, however, usually isn't associated with nausea or vomiting or aggravated by noise or bright light — all common features of migraines.

Ominous Headache

Headache pain as a symptom of emergent etiology that needs neurology or ED referral. Examples:

- Tumor
- Venous sinus thrombosis
- Pseudotumor cerebri
- Hydrocephalus
- Thunderclap headache

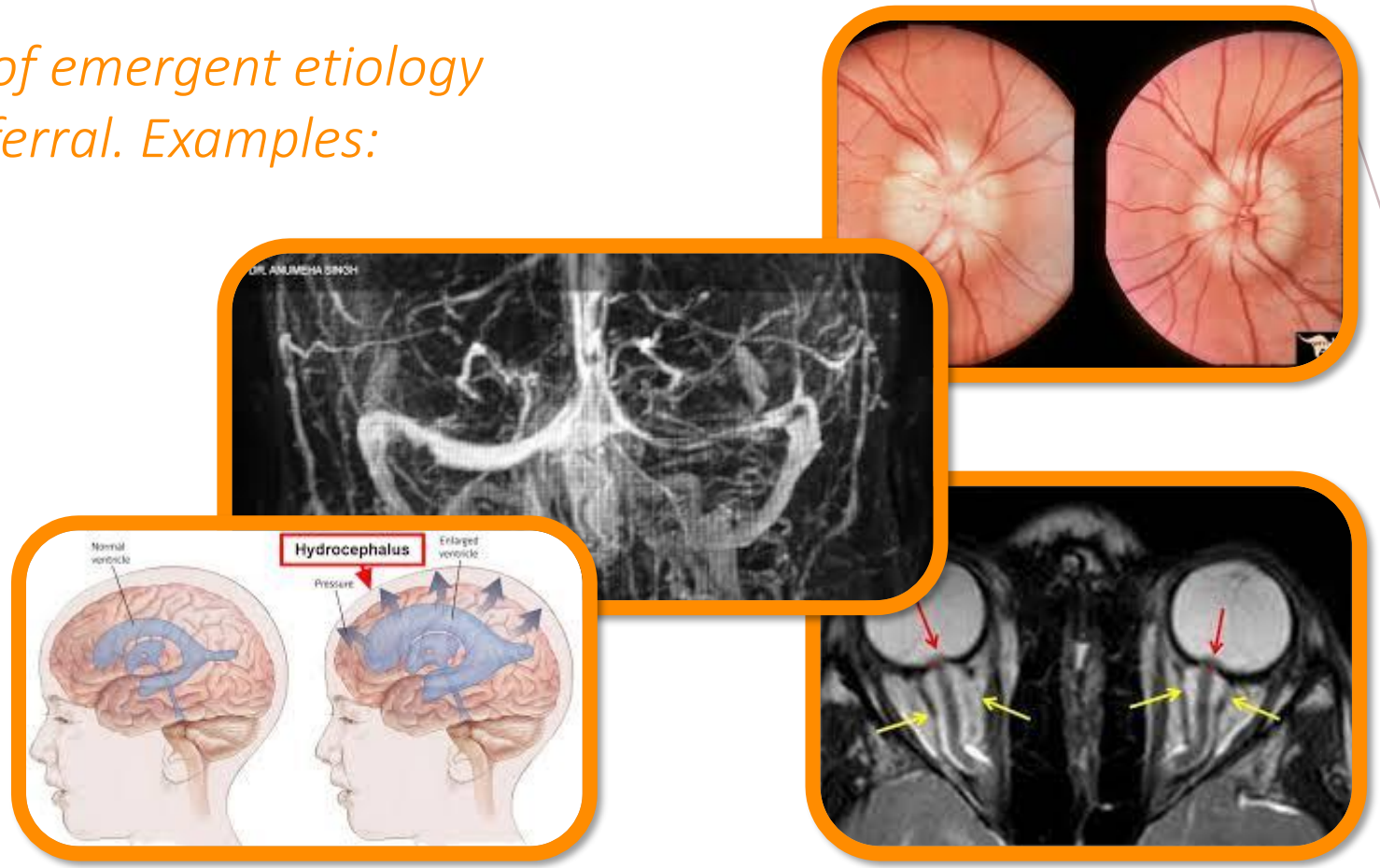


TABLE. THE SNOOP MNEMONIC FOR SECONDARY HEADACHE DISORDER RED FLAGS

Mnemonic	History features	Physical examination features
Systemic	History of malignancy, immunosuppression, or HIV or complaints of fever, chills, night sweats, myalgias, weight loss, or jaw claudication	Abnormal systemic examination, including blood pressure and temperature
Neurologic	Focal or global neurologic symptoms, including change in behavior or personality, diplopia, transient visual obscurations, pulsatile tinnitus, motor weakness, sensory loss, or ataxia	Abnormal neurologic examination
Onset, sudden	Headache reaches peak intensity in less than 1 minute (thunderclap)	
Onset age <5 or >65	New-onset headache before age 5 years New-onset headache after age 65	
Pattern change	Progressive headache (evolution to daily headache) or change in headache characteristics	
	Precipitated by Valsalva maneuver	
	Postural aggravation	
Papilledema	n/a	Papilledema
Pregnancy	New-onset headache during pregnancy Change in headache during pregnancy	
Phenotype of rare headache	Trigeminal autonomic cephalalgia; hypnic; exercise-, cough-, or sex-induced	

Secondary Headaches Requiring Additional Investigation

Secondary Headache	Possible Etiology
Recurrent headaches in patients younger than age five.	Arteriovenous (AV) malformation.
Recurrent headaches in patients older than 50.	Cranial arteritis, mass lesion.
Abrupt-onset, acutely painful headache ("worst headache of my life").	Subarachnoid hemorrhage.
Headaches of recent origin that are becoming increasingly more painful.	Mass lesion; subdural hematoma.
Headaches with concomitant fever, stiff neck, vomiting, cutaneous rash.	Meningitis, encephalitis, Lyme disease, collagen vascular disease.
Headaches associated with non-remitting neurological signs or symptoms such as papilledema, vertigo, seizures, personality changes.	Mass lesion, AV malformation, increased intracranial pressure, encephalitis, meningitis.
Headaches abruptly after bending, coughing, exertion or Valsalva.	Mass lesion, subarachnoid hemorrhage.
Headaches abruptly after head trauma.	Epidural or subdural hematoma.
Headaches associated with systemic cancer or HIV.	Metastasis, opportunistic neurologic infection.
Headaches during pregnancy or postpartum.	Venous sinus thrombosis.

Conditions Associated with Secondary Headache

"Thunderclap" Headache
Persistent Worsening Headache
Subarachnoid hemorrhage
Cerebral venous sinus thrombosis (CVST)
Reversible cerebral vasoconstriction syndrome
Carotid/vertebral artery dissection
Pituitary apoplexy
Intracerebral hemorrhage/hematoma
Hypertensive encephalopathy
Idiopathic thunderclap hemorrhage (Call–Fleming syndrome)
Raised cerebrospinal fluid (CSF) pressure (tumor, abscess, CVST, idiopathic intracranial hypertension)
Low CSF volume (post-lumbar puncture, spontaneous CSF leak)
Meningitis (acute/chronic)
Hypoxia/hypercapnia
Substance abuse/withdrawal
Systemic inflammatory conditions, including temporal arteritis

Headaches

Location
Duration
Severity
Quality
Timing
Modifying Factors
Context
Associated S/S

HIT-6™
(VERSION 1.1)

HEADACHE IMPACT TEST™

This questionnaire was designed to help you describe and communicate the way you feel and what you cannot do because of headaches.

To complete, please circle one answer for each question.

1	When you have headaches, how often is the pain severe?	Never	Rarely	Sometimes	Very Often	Always
2	How often do headaches limit your ability to do usual daily activities including household work, work, school, or social activities?	Never	Rarely	Sometimes	Very Often	Always
3	When you have a headache, how often do you wish you could lie down?	Never	Rarely	Sometimes	Very Often	Always
4	In the past 4 weeks, how often have you felt too tired to do work or daily activities because of your headaches?	Never	Rarely	Sometimes	Very Often	Always
5	In the past 4 weeks, how often have you felt fed up or irritated because of your headaches?	Never	Rarely	Sometimes	Very Often	Always
6	In the past 4 weeks, how often did headaches limit your ability to concentrate on work or daily activities?	Never	Rarely	Sometimes	Very Often	Always

COLUMN 1 (6 points each)	+	COLUMN 2 (8 points each)	+	COLUMN 3 (10 points each)	+	COLUMN 4 (11 points each)	+	COLUMN 5 (13 points each)

To score, add points for answers in each column.

Please share your HIT-6 results with your doctor.

Total Score _____

Higher scores indicate greater impact on your life.

Score range is 36–78.

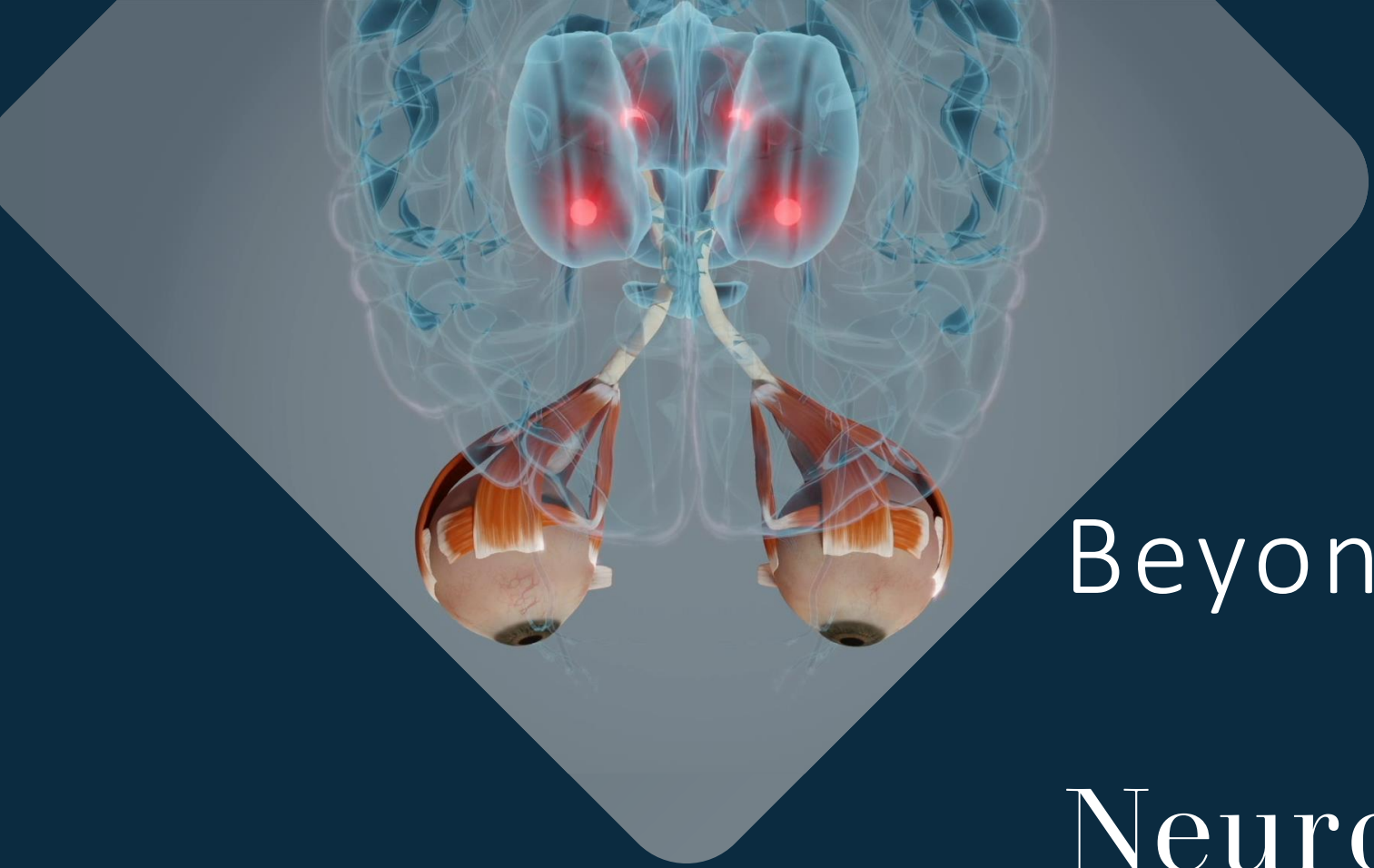
Vision Screening/Bedside Assessment

- Optic nerve function, CN 3,4 6, pupils
- visual acuity
- confrontation visual fields/ VFs
- color vision testing
- Extraocular motility function
  - fixation, saccades, and pursuit (may be performed monocularly or binocularly)
  - near point of convergence (performed binocularly)
  - stereopsis (performed binocularly)

Cranial Nerve Assessment					
Nerve	**Name**	**Function**	**Test**	**Results**	
				Normal	Abnormal
I	Olfactory	S: Smell	Have athlete smell something		
II	Optic	S: Vision	Have athlete identify fingers		
III	Oculomotor	M: Pupillary Reaction	Shine light in athlete's eyes		
IV	Trochlear	M: Eye Movement	Follow finger without moving head		
V	Trigeminal	S: Facial Sensation	Touch face		
		M: Mouth Movement	Hold Mouth Open		
VI	Abducens	M: Lateral Eye Movement	Follow finger without moving head		
VII	Facial	S: Taste	Taste something anterior tongue		
		M: Facial Movement	Smile, Wrinkle Face, Puff Cheeks		
VIII	Vestibulocochlear	S: Hearing & Equilibrium	Snap Fingers by ear		
			Rhomberg Test		
IX	Glossopharyngeal	M: Gag Reflex	Use tongue depressor		
		S: Sensation from Tongue and Ear	Taste something posterior tongue		
X	Vagus	S & M: Swallowing and Voice	Swallow and have athlete say "ah"		
XI	Spinal Accessory	M: Trapezius & SCM	Shrug shoulders		
XII	Hypoglossal	M: Tongue movement and Strength	Stick out tongue, apply resistance with a tongue depressor		

Cranial Nerves Assessment Form

Cranial Nerve	Assessment Technique	Normal Response	Client's Response
I. Olfactory	Ask the client to smell and identify the smell of cologne with each nostril separately and with the eyes closed.	Client is able to identify different smell with each nostril separately and with eyes closed unless such condition like colds is present.	Client was able to describe the odor of the materials used.
II. Optic	Provide adequate lighting and ask client to read from a reading material held at a distance of 36 cm. (14 in.).	The client should be able to read with each eye and both eyes.	Client was able to read with each eye and both eyes.
III. Oculomotor	*Reaction to light:* Using a penlight and approaching from the side, shine a light on the pupil. Observe the response of the illuminated pupil. Shine the light on the pupil again, and observe the response of the other pupil.	Illuminated and non-illuminated pupil should constrict.	PERRLA (pupils equally round and reactive to light and accommodation)
	Reaction to accommodation: Ask client to look at a near object and then at a distant object. Alternate the gaze from the near to the far object. Next, move an object towards the client's nose.	Pupils constrict when looking at a near object, dilate when looking at a distant object, converge when near object is moved towards the nose.	
IV. Trochlear	Hold a penlight 1 ft. in front of the client's eyes. Ask the client to follow the movements of the penlight with the eyes only. Move the penlight upward, downward, sideward and diagonally.	Client's eyes should be able to follow the penlight as it moves.	Both eyes are able to move as necessary.
V. Trigeminal	While client looks upward, lightly touch lateral sclera of eye to elicit blink reflex.	Client should have a (+) corneal reflex, able to respond to light and deep sensation and able to differentiate hot from cold.	Client was able to elicit corneal reflex, sensitive to pain stimuli and distinguish hot from cold.
	To test light sensation, have client close eyes, wipe a wisp of cotton over client's forehead.		
	To test deep sensation, use alternating blunt and sharp ends of an object. Determine sensation to warm and cold object by asking client to identify warmth and coldness.		
VI. Abducens	Hold a penlight 1 ft. in front of the client's eyes. Ask the client to follow the movements of the penlight with the eyes only. Move the penlight through the six cardinal fields of gaze.	Both eyes coordinated, move in unison with parallel alignment.	Both eyes move in coordination.
VII. Facial	Ask client to smile, raise the eyebrows, frown, and puff out cheeks, close eyes tightly. Ask client to identify various tastes placed on tip and sides of tongue.	Client should be able to smile, raise eyebrows, and puff out cheeks and close eyes without any difficulty. The client should also be able to distinguish different tastes.	Client performed various facial expressions without any difficulty and able to distinguish varied tastes.
VIII. Vestibulocochlear	Have the client occlude one ear. Out of the client's sight, place a tickling watch 2 to 3 cm. ask what the client can hear and repeat with the other ear.	Client should be able to hear the tickling of the watch in both ears.	Client was able to hear tickling in both ears.
	Ask the client to walk across the room and back and assess the client's gait.	The client should have upright posture and steady gait and able to maintain balance.	The client was able to stand and walk in an upright position and able to maintain balance.
IX. Glossopharyngeal	Ask the client to say "ah" and have the patient yawn to observe upward movement of the soft palate.	Client should be able to elicit gag reflex and swallow without any difficulty.	Client was able to elicit gag reflex and able to swallow without difficulty.
	Elicit gag response.		
	Note ability to swallow.		
X. Vagus	Ask the patient to swallow and speak (note hoarseness)	The client should be able to swallow without difficulty and speak audibly.	Client was able to swallow without difficulty and speak audibly.
XI. Accessory	Ask client to shrug shoulders against resistance from your hands and turn head to side against resistance from your hand (repeat for other side).	Client should be able to shrug shoulders and turn head from side to side.	Client was able to shrug his shoulders and turn his head from one side to the other.
XII. Hypoglossal	Ask client to protrude tongue at midline and then move it side to side.	The client should be able to move tongue without any difficulty.	The client was able to move tongue in different directions.



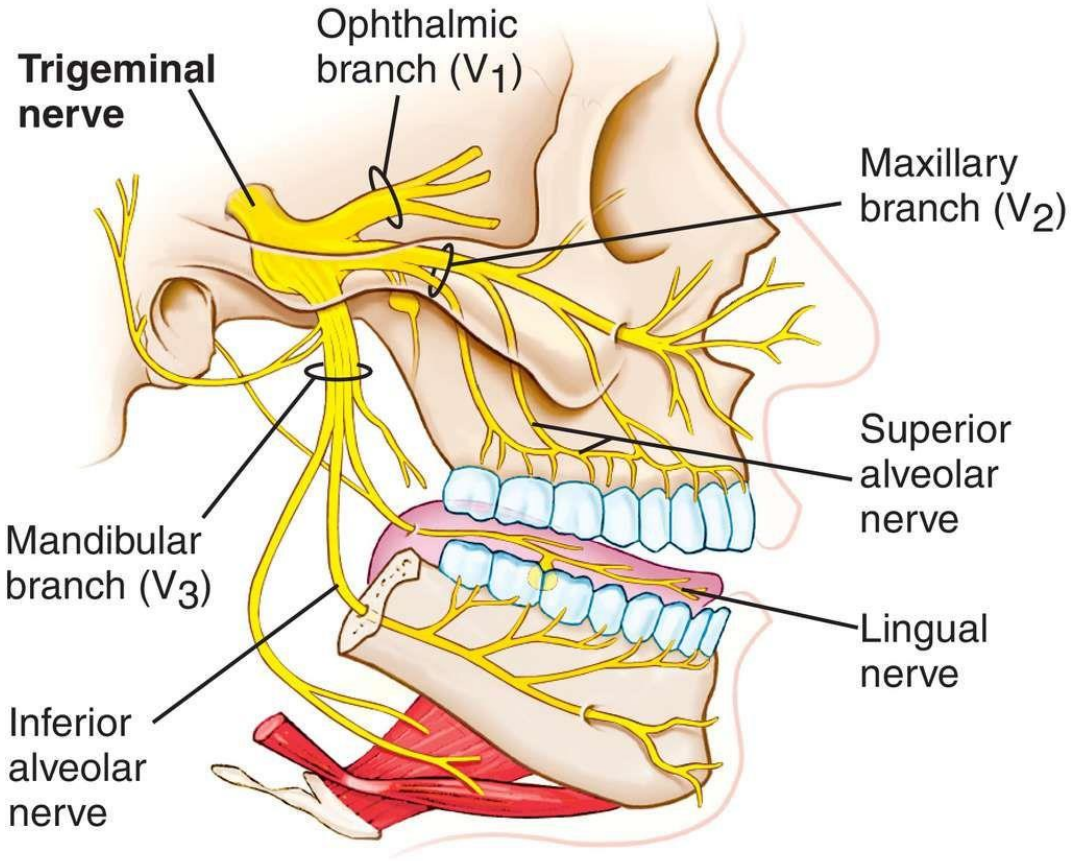
Beyond Misalignment:

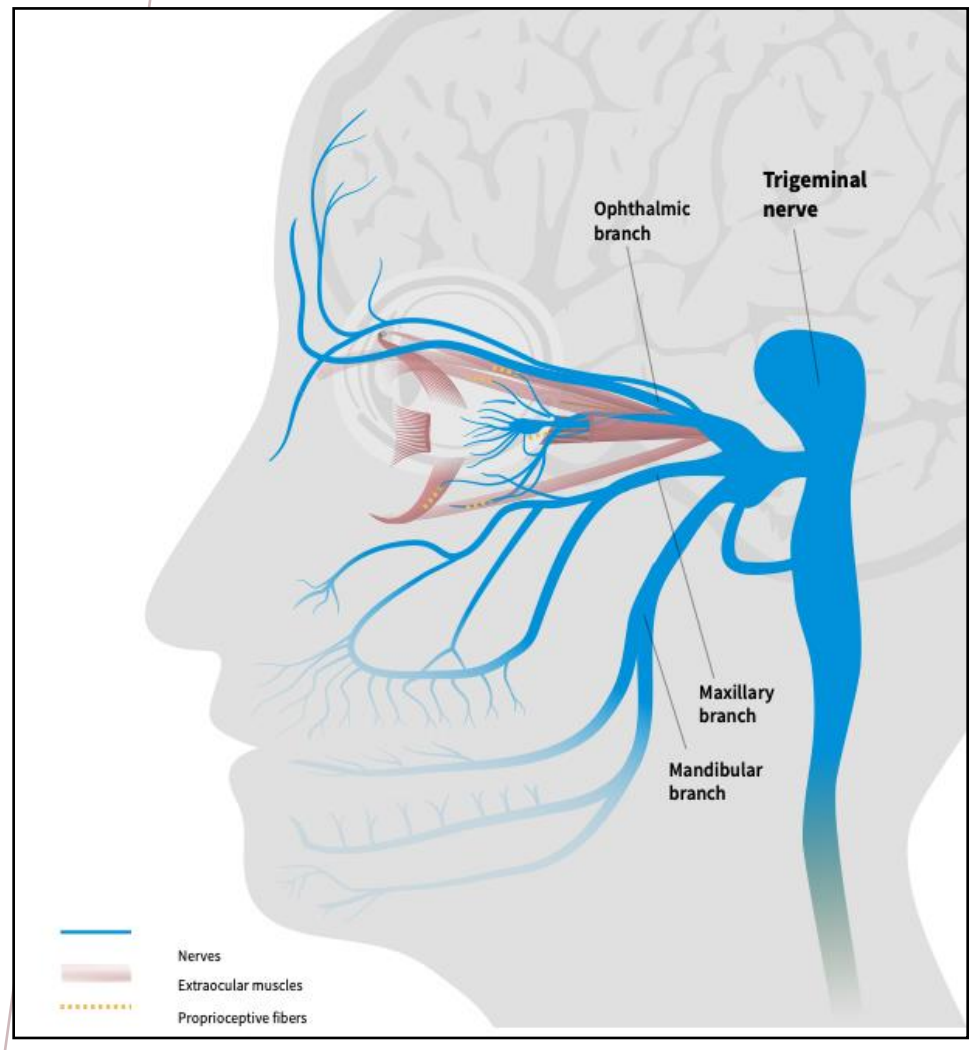
Neurological Mechanism behind patient discomfort

Cranial Nerve 5
Trigeminal Nerve

- Changing Eye Alignment has an affect on symptoms, either good or bad.

- Changing eye alignment can affect pain receptors.





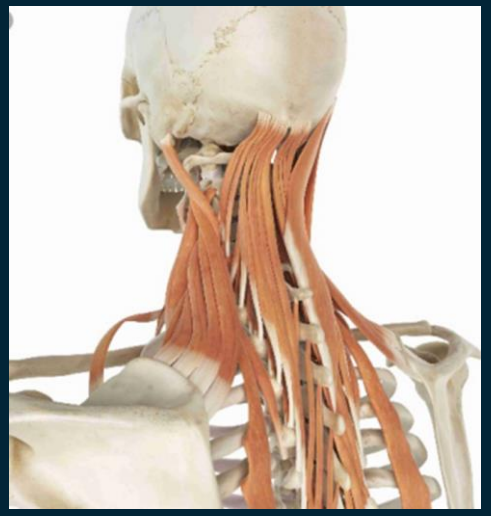
Headache Pain
associated with Vision and Neural conflict

- Proprioceptive fibers in the EOMs provide afferent feedback to the brain about the location of each eye.
- These proprioceptive signals are transmitted through the ophthalmic branch of the trigeminal nerve, which is responsible for detecting sensation and reporting pain.

American Optometric Association (AOA Clinical Care Group). The Effects of Computer Use on Eye Health and Vision. April 1997.
Leigh, R., Zee, D. The Neurology of Eye Movements. The Ocular Motor Periphery.
Weir, C., Journal of Neuro-Ophthalmology. Proprioception in Extraocular Muscles. Vol. 26, No. 2. 2006.
The Vision Council. Digital Eye Strain. Accessed April 2018.

J Neuro-Ophthalmol 2018; 38: 237-243

Connecting the Dots: Symptoms to Pain



Eye Misalignment → Posterior Parietal Cortex → Conflict leading to neural confusion → Painful symptoms in head, face & neck

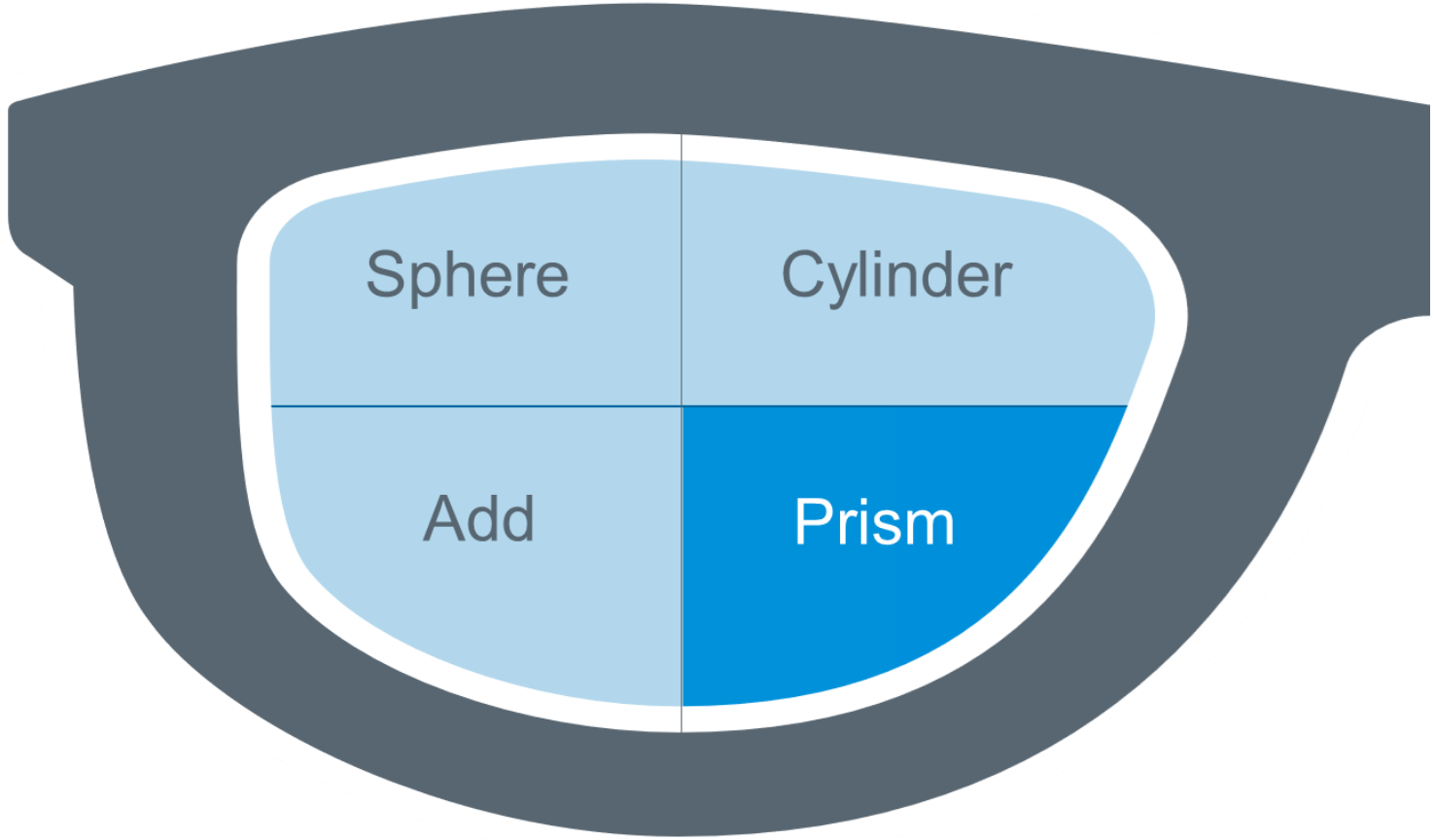
3 Questions….

1. Would a computer lens help this?

2. How would this effect a new progressive lens wearer?

3. How is my patient's eye alignment being changed by my prescription? Convergence Excess?

The Components of a Prescription Lens

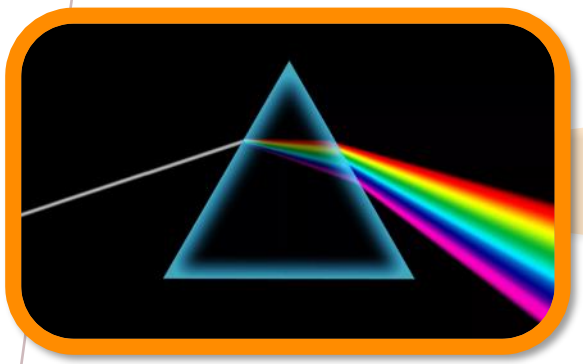


Prism Calculation Challenges

- Cover test
- Phorias
- Fixation Disparity
- Percival's Criteria
- Sheard's Criteria
- Maddox Rod

The Evolution of Prism

Standard Prism



Slab-off Prism

Contoured Prism

90% of people have a larger misalignment at near, so linear prism simply doesn't make sense for today's wearer.

Prism was never easy, until…

- Figuring out prism, let alone microprisms can be one of the most difficult prescription calculations we do on a weekly basis.
- The issues with prescribing prism
  - Too subjective
  - Often guess work
  - Highly variable

Until now

Chronic Headache Study, MD Neurology HA Clinic (n=179)

93%

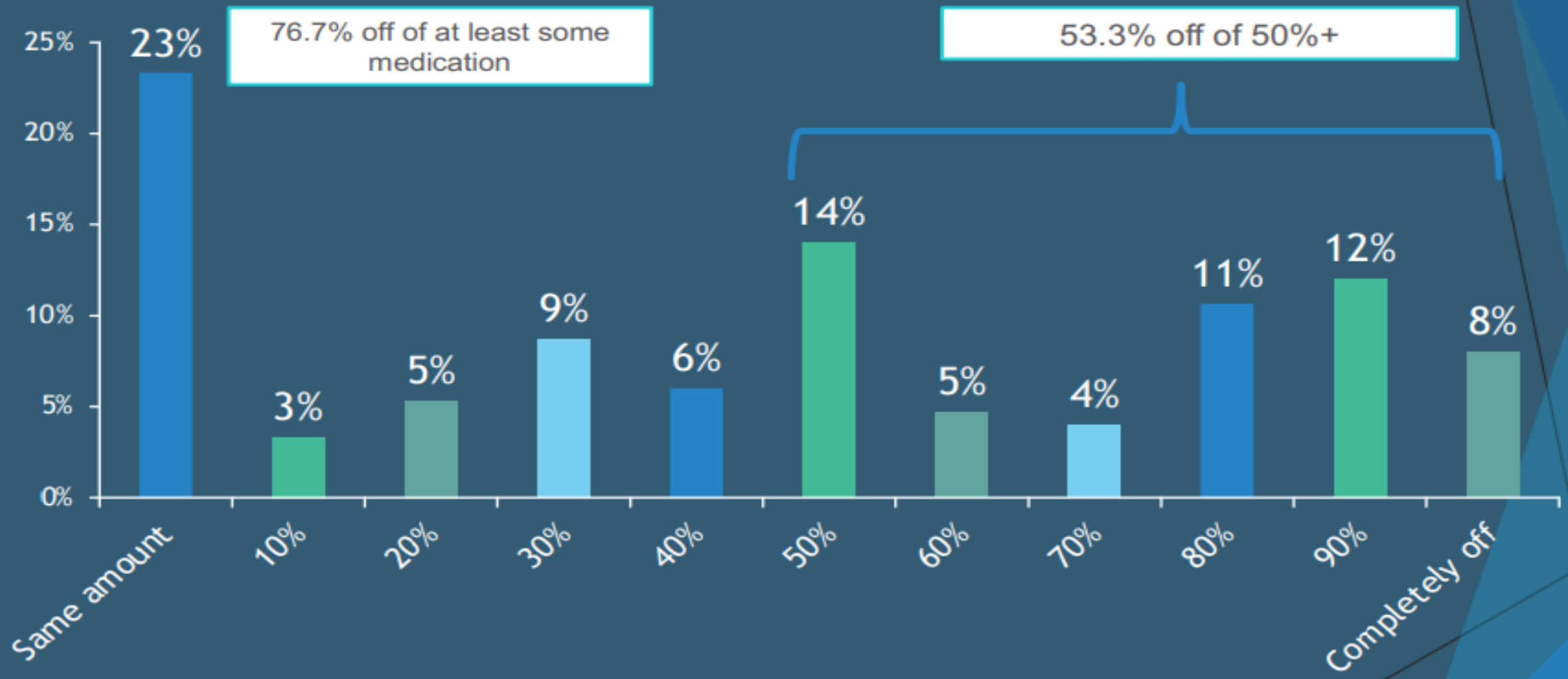
of patients have had a **positive response** to wearing contoured prism

82%

of patients suffering from chronic daily headaches reported their symptoms were **substantially reduced** or **“basically gone”** after wearing contoured prism for 90 days.

Miles, C, Krall, J, Thompson, V, Colvard, M. A New Treatment for Refractory Chronic Daily Headache. The study included 179 patients who suffered from chronic daily headaches and was conducted from September 2012 to June 2013 by Neurology Associates, LLC, and the offices of Dr. Jeff Krall in Sioux Falls, South Dakota.

In your 90 days wearing contoured prism, by how much have you decreased your headache medication usage?



STUDY REVIEW:
IMPACT OF NEUROLENS USE ON THE QUALITY OF LIFE IN INDIVIDUALS WITH HEADACHES: A RANDOMIZED DOUBLE-MASKED, CROSS-OVER CLINICAL TRIAL

The ***"Why":*** To establish if patients benefit from prescriptions that incorporate contoured prism versus prescriptions that did not incorporate contoured prism.

Study design:

- a double masked cross-over design
- The subjects were randomized
- then crossed-over to the opposite lens.

STUDY REVIEW:
IMPACT OF NEUROLENS USE ON THE QUALITY OF LIFE IN INDIVIDUALS WITH HEADACHES: A RANDOMIZED DOUBLE-MASKED, CROSS-OVER CLINICAL TRIAL

- Methods: Subjects (18 to 60 years) with good stereoacuity
- If HIT-6 score≥56 points were enrolled.
- Each subject wore both control lens and Neurolens (NL) for 30±10 days each.
- The primary outcome of the study was to assess the difference in the HIT score between the two treatments.

STUDY REVIEW:
IMPACT OF NEUROLENS USE ON THE QUALITY OF LIFE IN INDIVIDUALS WITH HEADACHES: A RANDOMIZED DOUBLE-MASKED, CROSS-OVER CLINICAL TRIAL

- **Results:** Of the subjects randomized, 88% (170/195) completed the study. Overall, *subjects reported a larger improvement in HIT score improvement with NL compared to Control* (mean diff. (95% C.I.): -1.53 points (-2.8 to -0.26), P-value = .01).

- **Conclusion:** Neurolens produced a statistically significant reduction in the impact of headaches on individuals' quality of life compared to the placebo .

Patient 3: Maddie

Synopsis: 16-year-old female presents with complaints of "shadowy" vision, headaches and eye strain. Saw a neurologist (had MRI) and saw previous doctor (OMD). Everyone said everything is normal. After testing reported double vision at near.

Lifestyle Index:

Headaches	5
Neck Stiffness	5
Computer Discomfort	4
Tired Eyes	3
Dry Eye Sensation	1
Light Sensitivity	5
Dizziness	4

Patient 3: Maddie

Patient Results

Date 5/29/2021 11:36 AM
Patient ID 114904
Age 15

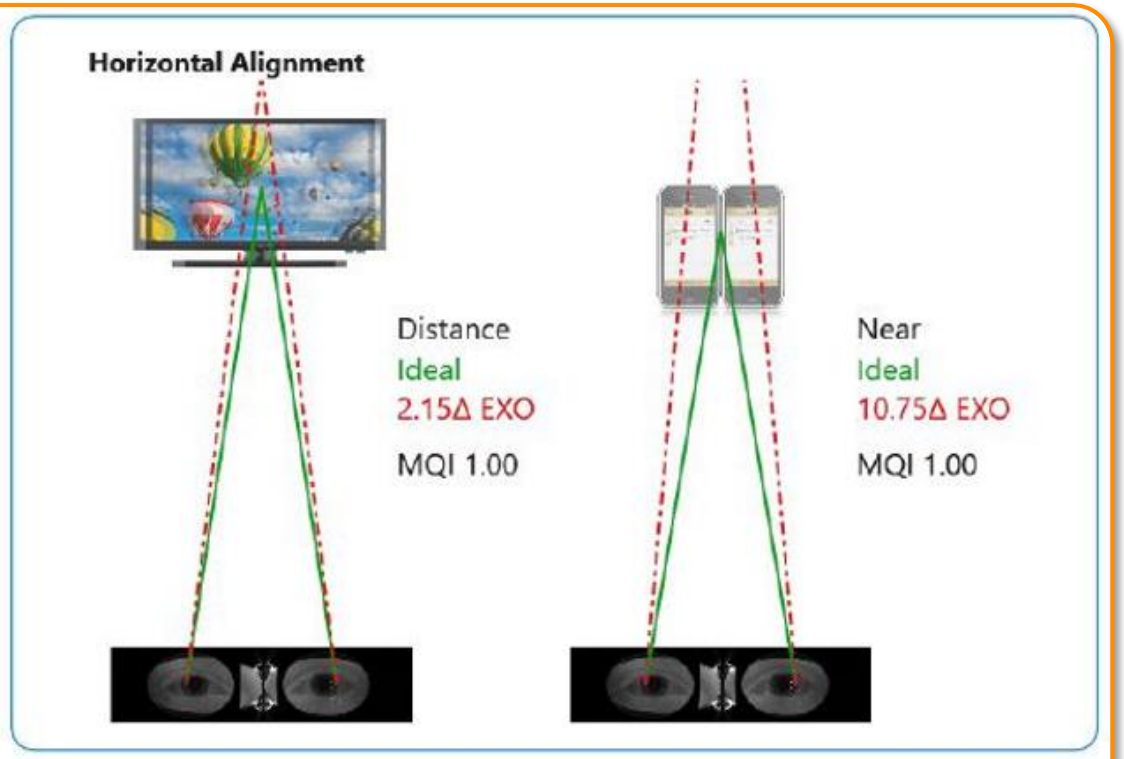
neurolens Value 1.6 BI

Final Rx to be determined by eye doctor

Symptomatic

Lifestyle Index

Headaches	5
Neck Pain	5
Computer Use	4
Tired Eyes	3
Dry Eye	1
Light Sensitivity	5
Dizziness	4



The red dotted line represents your eyes desired alignment, the green line is ideal alignment. The difference between the lines represents the work your eyes need to do to see a single clear image.

Patient 3: Maddie

Synopsis: 16-year-old female presents with complaints of "shadowy" vision, headaches and eye strain. Saw a neurologist (had MRI) and saw previous doctor (OMD). Everyone said everything is normal. After testing reported double vision at near.

Lifestyle Index:

Headaches	5
Neck Stiffness	5
Computer Discomfort	4
Tired Eyes	3
Dry Eye Sensation	1
Light Sensitivity	5
Dizziness	4

Measurement Device (NMD):
2.15 EXO Distance
10.75 EXO Near

Prescribed: Neurolens SV
-2.25-0.75x177
-2.75-0.75x020
2.0 BI

Results: Patient is doing great and has not been having headaches or double vision. Patient has begun a myopia control protocol and we will explore VT options so she can comfortably wear contacts in the future.

IF THEY DON'T REACH OUT TO YOU, REACH OUT TO THEM!

PsyDs

PCPs

Neurologists

Occupational Sources

Social media

Eblasts

Website

RESOURCES

- Put together a packet
- Use the Journal of Opthalmology article….
- https://www.ophthalmologytimes.com/view/treating-traumatic-brain-injury-neuro-optometrically
- Use the Peer Reviewed, double blind HA study
- Use your own brochures and cards, testimonials

SUMMARY

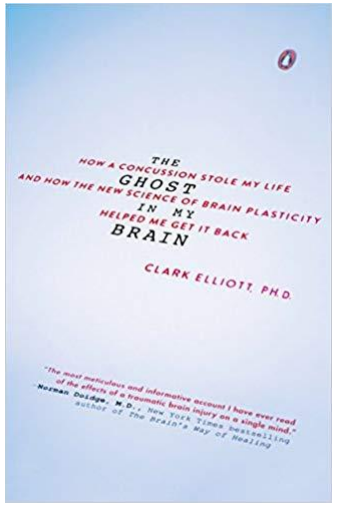
- Start with your own protocol/checklist
- Develop/ borrow a consistent questions list
- Get good at basic neuro testing and recording
- Devise a treatment plan
- Understand where you want to go
- Start tomorrow!

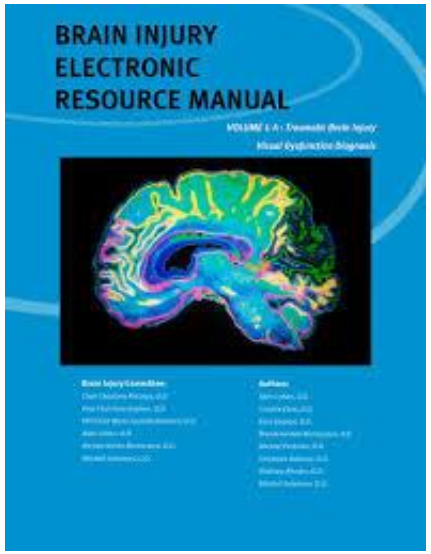
FOREVER A PATIENT, DOCTOR ADVOCATE AND STUDENT

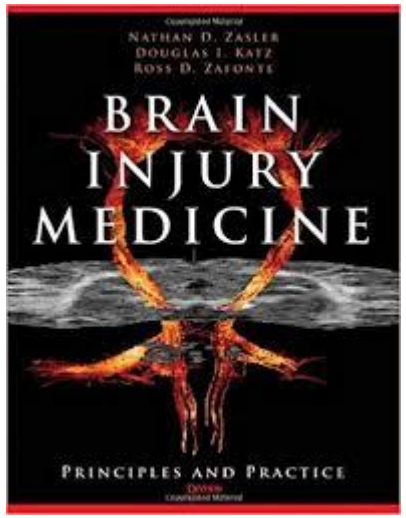
Opened my eyes to how important we are for these patients

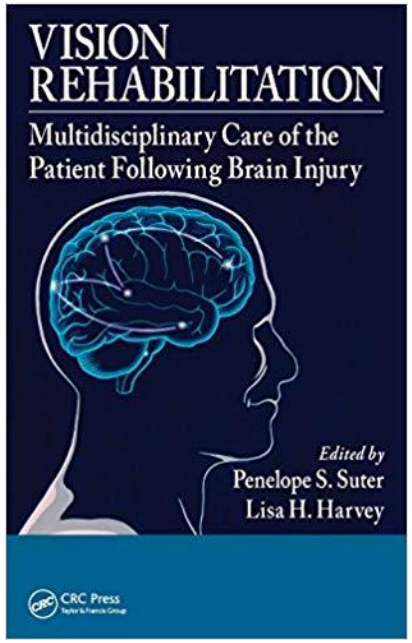
Resources:

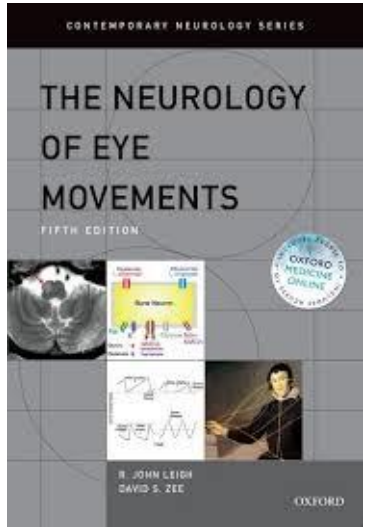
AOA Vision Rehabilitation
AOA Sports and Performance Vision

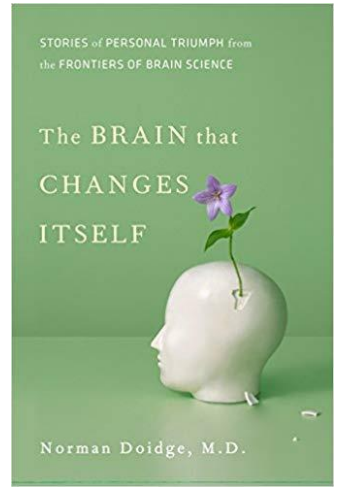


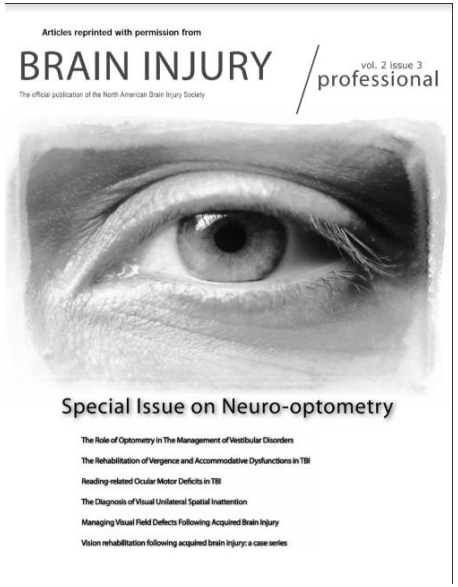












THANK YOU

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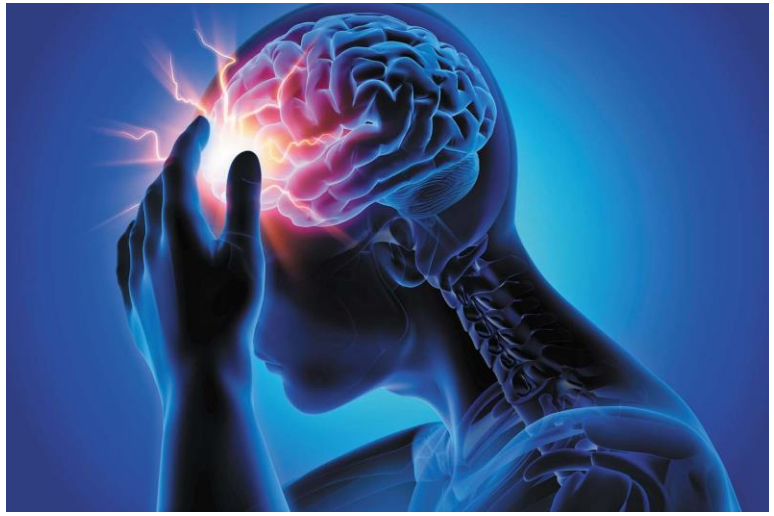
STUDY REVIEW:
IMPACT OF NEUROLENS USE ON THE QUALITY OF LIFE IN INDIVIDUALS WITH HEADACHES: A RANDOMIZED DOUBLE-MASKED, CROSS-OVER CLINICAL TRIAL



Comparing different optical and medical solutions
published research papers comparison

Contoured Prism(Neurolens) out preformed: As benchmarked against improvements to HIT 6 scores

- **Control lenses without prism**
- **480 nm optical filters**
- **620 nm optical filters**

- **Medical interventions such as**
  - **Amovig**
  - **Botox**
  - **Topomax**

Neurolens
Control lens
No prism
480nm
Optical Filter
620nm
Optical Filter

As you can see, symptom relief based on the HIT-6 questionnaire with Neurolens is better than what was reported with other optical interventions.

Optical correction of refractive error for preventing and treating eye symptoms in computer users

Authors' conclusions

There is low to very low quality evidence that providing computer users with progressive computer glasses does not lead to a considerable decrease in problems with the eyes or headaches compared to other computer glasses. Progressive computer glasses might be slightly better than progressive glasses for daily use in the short term but not in the intermediate term and there is no data on long-term follow-up.