

#### **OBJECTIVES**

- Talk Through The "Research" Patients Are Doing That Might Make Them Have Expectations that Are Difficult to Manage
- Help navigate difficult conversations and difficult troubleshooting situations
- How to navigate the know it all customers or the customers that don't understand the benefits that are currently intangible to them.
- Work through troubleshooting complex Rx's and what needs to be remade and what doesn't,
- Discuss the measurements we should be taking today vs. 5 years ago and why they are different as well as the role they play in prescriptions.
- Provide a guide as to what a patient might say and try to communicate and what the underlying issue or cause of discomfort is.

#### **CONSUMER (CRINGE) VS. PATIENT:**



Consumer Reports is an American magazine published since 1936 by a nonprofit org. dedicated to unbiased product testing, consumer-oriented research, public education, and advocacy.

- Hits both presbyopes (still reading magazines ©) and millennials (reading online reviews)
- Up to 40% of patients are researching online prior to coming to your practice
- We can't fix what we don't know!

# CASE STUDY 1: "HOW TO GET THE BEST EYEGLASS LENSES"

- Defines and discusses the need or "lack of need" for each component of the lens
- 1. Single vision can "get away" with inexpensive plastic (\$29-\$149)
- 2. Polycarbonate: More popular, durable, thinner and lighter (\$9-\$205)
- 3. High-index: Even thinner and lighter than polycarbonate for the strongest prescriptions (\$150 SV \$350 PAL)
- 4. Trivex: More scratch-resistant (\$200 SV \$400 PAL)



# CASE STUDY 1: "HOW TO GET THE BEST EYEGLASS LENSES"

- Progressives (\$260): Consider if needed for reading and distance or if split screen from bi/trifocals are uncomfortable
- High-definition (\$310): Sharper vision and better peripheral vision for more complex visual problems such as cataracts or corneal scars



# CASE STUDY 1: "HOW TO GET THE BEST EYEGLASS LENSES"

- 1. Anti-scratch: Generally good idea for all. Check warranty (mentions Warby Parker 1 year)
- 2. Anti-reflective: (\$50-\$100)- Used to be hard to clean, but now has anti-smudge/anti-fog. Good for computer use and night driving
- 3. UV: (\$20-\$100)- Good idea due to risk of cataracts
- 4. Photochromic: (\$50-\$150)- Darkens in sunlight and helpful if you'd rather not carry sunglasses
- 5. Blue-light Blocking: (\$30-\$180)- Reduce exposure to computer LED lights but debated if needed for eye health or safety (quoted Johns Hopkins Retina Division Chief)

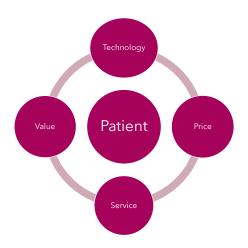


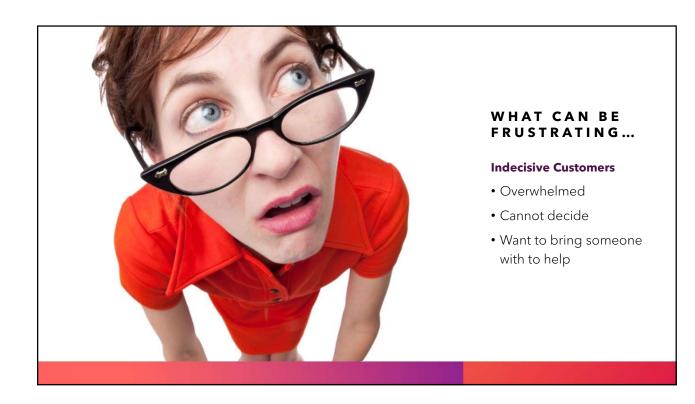
# CASE STUDY 1: "HOW TO GET THE BEST EYEGLASS LENSES"

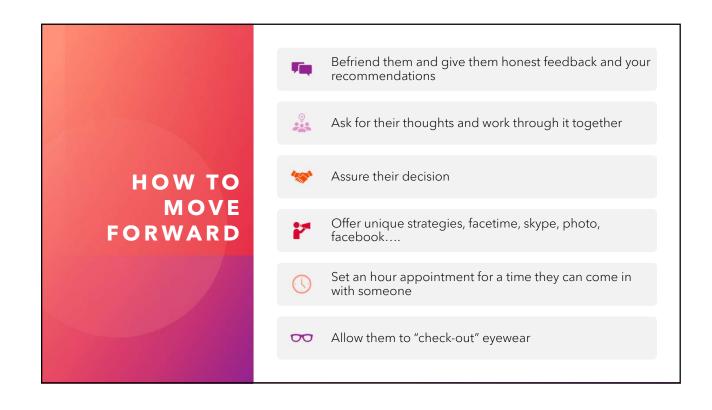
- Gives 4 ways to save money
- 1. Ask optician for discount
- 2. Have costs broken down (cautions bundled lenses)- ironic because Costco's success is on bundling
- 3. Find out about cheaper alternatives (suggests generic forms)
- 4. Check online prices (highlights Costco HD PAL with AR for \$130 vs. Walmart at \$255)



#### MOTIVATORS FOR THE PURCHASE DECISION









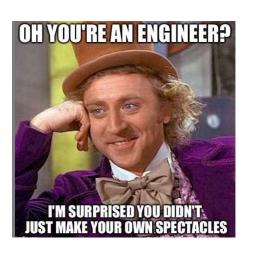
## WHAT CAN BE FRUSTRATING...

#### The Know-it-all Customers

- Try to trick you
- Talk down to you
- Create win- lose situations
- Can be bullies at times

# HOW TO MOVE FORWARD

- Take time to appreciate their knowledge
- Don't try to outsmart them
- Don't belittle them
- Don't correct them
- When recommending product, they typically want the best... tell them your recommendations and tell them why, you know they will already agree with you and probably already know.... But just to be sure there are no questions... here's the product and why it's a good fit.





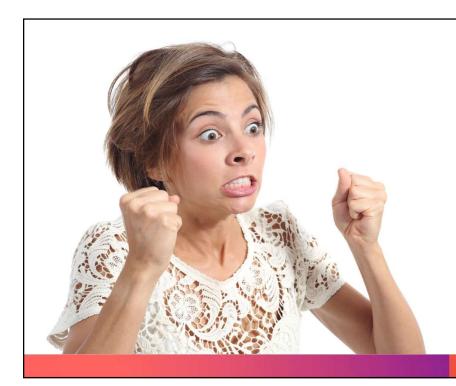
# WHAT CAN BE FRUSTRATING

#### **The Clueless**

- Want things they can't have
- Make decisions based on "tangibles"
- Call things the wrong names and confuse us
- Don't think they need anything
- Only want what's "covered"

#### **HOW TO MOVE FORWARD**

- Find the synergy and focus on what they like and what their root needs and wants are and then modify your recommendation to incorporate what they wanted
- Give them realistic expectations and take the time to explain why a product or selection wouldn't work and be nice about it.
- ? Clarify what they are asking for or wanting
- Don't belittle them or correct them. Make it seem as though everyone confuses it and make it lighthearted.
- Explain to them why their needs are above what might be covered and tell them what they would sacrifice by only getting the covered options.



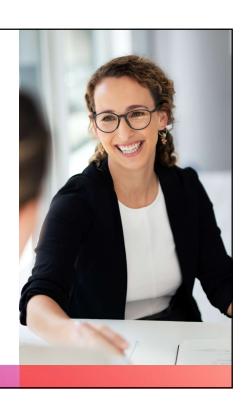
# WHAT CAN BE FRUSTRATING

#### The "Ragers"

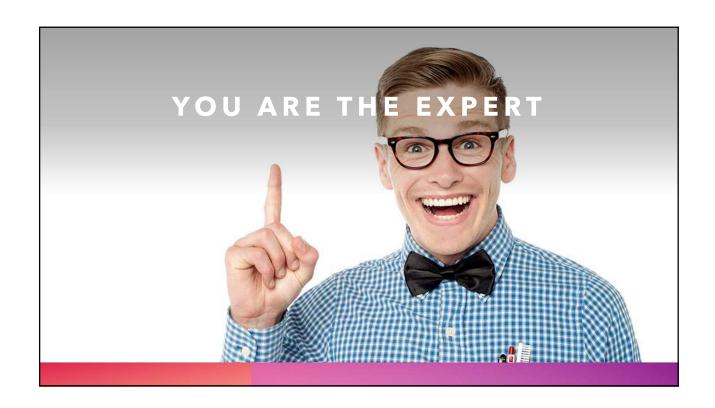
- Angry
- Frustrated
- Misplaced frustration
- Stop listening
- Sometimes.... It just doesn't make sense...

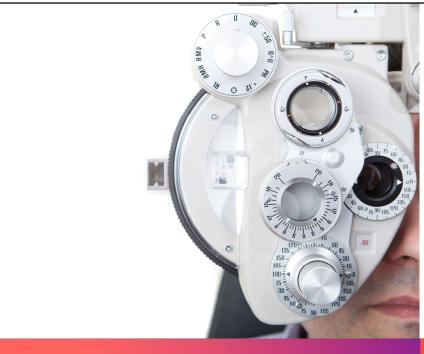
#### **HOW TO MOVE FORWARD**

- Don't interrupt them
- Give them your full attention until they complete their thought (aka: rant)
- Be empathetic to their situation
- Be careful to not engage with them, if they go low, you go high
- Make a goal for yourself to diffuse the situation without caving or getting emotional
- Put your own emotions aside
- Be understanding, that is not the same as agreeable..
- It's ok to allow the patient to finish their thought and bring the conversation to a respectful place by simply stating... you understand they are frustrated and you want to help them and you believe you can but you need them to respect you as a person going forward and move on



# TROUBLESHOOTING AN RX INVOLVES MORE THAN JUST THE DOCTOR





#### PROCEDURE TO REDUCE CHAIR TIME

Standardize procedures for possible remakes and to reduce chair time.

**Reception**- prior to simply scheduling a patient for an rx check the staff will inform the patient that they will be seeing an optician prior to seeing the doctor.

The patient will be asked to **bring in old glasses** for the staff to compare.

"Mrs. Smith, your appointment time is 10:15. You will be seeing the optician first. Please bring your old glasses so we can evaluate changes in your prescription or frame fitting in order to completely uncover your vision difficulties".

#### STEPS TO TROUBLESHOOTING BEFORE THEY SEE THE DOCTOR AGAIN

- Ask the patient detailed questions to understand what their specific issues are.
  - Tell me when you are struggling to see...(computer, reading, street signs etc)
  - Are you struggling all the time or just some of the time? If it is just some time, when does it normally occur? (Digital Eye Strain)
- Verify the prescription of old and new glasses in the lensometer
- Mark up the old and new glasses with a centration chart if it is a progressive. Check if the fitting height and PD are properly placed



#### STEPS TO TROUBLESHOOTING BEFORE THEY SEE THE DOCTOR AGAIN

- If it is a single vision or lined bifocal/trifocal use the lensometer to dot optical center and check PD and OC height of both old and new glasses.
- Check the adjustment of the glasses. Do they fit properly? Do they need more or less wrap or pantoscopic tilt? The addition of pantoscopic tilt will almost always help the patient be able to find their intermediate and reading area easier.



# WHAT TO EXPECT WHEN THE PATIENT HAS A CHANGE IN SCRIPT WHEN IN A PROGRESSIVE

- 1 Click of Spherical Change- 1 Day Adaption
- 1 Click of Cylinder Change- 1 Day of Adaption
- 1 Click of Add Change- 1 Day of Adaption
- Design Change- 1 Day of Adaption



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	Rx Troubleshooting Check List
	Supplier - House and additional Vision and all —— Indiana Association Control on the
	Patient Name
	Complaint Issue Use of RX.
	Sph Cyl Axis Add OC Ht. DPD NPD BC Prism Seg Style
	OS OS
	Lens Material Frame Material Vertex Distance
	100 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1
	New Rx OD Sph Cyl Axis Add OC Ht. DPD NPD BC Prism Seg Style
	New NX OUSDIN CVI AXIS Add OC NI. DPD NPD DC PISSIN Seg Style
	Lens Material Frame Material Vertex Distance
	Is the frame a good Fit?
TROUBLESHOOTING	Is the Vertex Distance matched to old pair?
	Pantoscopic Tilt Checked?
CHECKLIST	Did we match Pantoscopic Tilt?
	Facial Wrap? New Tints or Coatings?
	Segs the same level between pairs?
	Progressive Fitting cross position verified?
	Prism matches Prescribed Prism?
	Current Medical Problems?  Current Prescriptions/ New Prescriptions?
	Current Prescriptions New Prescriptions ?  Does the problem come or go?
	Problem occurs at what distance?
	Anisometropia?
	Is Frame Adjustment correct?
	Is Frame Style correct for Patients Rx?
	What was recommended as a solution to the patient's problem?
	A CONTRACTOR OF THE CONTRACTOR
	Did your recommendations solve the patient's problem?

# STANDARD PROTOCOL

Optical Staff required to document on check list. Spotting up old and new RX is REQUIRED!

- Determine if the patient's issue is truly a need for an rx change.
- Were proper expectations set for the patient?
- If complaints are vague, is the patient experiencing buyer's remorse?

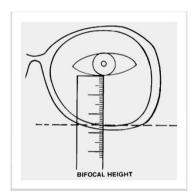


# CHECK FACIAL MEASUREMENTS

- Pupillary distance (PD)
- Vertical height measurement
  - Optical Center Height
  - Segment Height
- Position of Wear Measurements
  - Wrap
  - Vertex
  - Pantoscopic Tilt



#### **SEGMENT HEIGHT/PATIENT MEASUREMENTS**



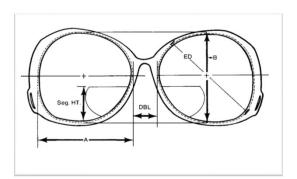




Lower edge of pupil

# SEGMENT HEIGHT MEASURING

- Segment height is:
  - Determined by working with the patient and their frame choice which has been adjusted for them.
  - The measurement will be to the lowest point of the frame (deepest), not the PD or GC of the lens



#### PROGRESSIVE/OC MEASUREMENT

- Accurate monocular PD
  - OD PD
  - OS PD
- Accurate fitting height
  - Measurement taken mid pupil
- Does the frame fit them correctly?
- Does the frame just need some adjustments to get the patient seeing out of the glasses better. A lot of times this is the case they don't need their glasses remade.



## COMMON CAUSES FOR PAL NON-ADAPT

- Segment Heights Too Low
- Incorrect Measurements
- Frame doesn't fit properly, constantly sliding into a position that is off optical center.
- Too much lens decentration



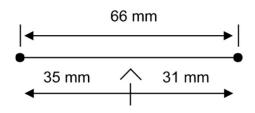
#### **MONOCULAR VS BINOCULAR**

#### Monocular PD's

- · Most commonly used
- Takes PD individually and will be more accurate to the patients Rx

#### Binocular PD's

- Used on occasion for specific product
- Takes PD individually and will be more accurate to the patients Rx

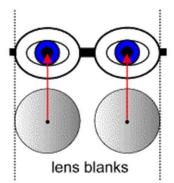


#### **BOXING SYSTEM AND BASIC PARTS**

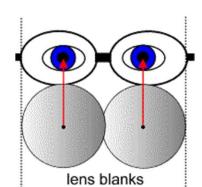
- "A" Horizontal frame measurement
- "DBL" Distance between lenses
- "ED" Effective diameter, typically diagonal
- "B" Vertical measurement
- "GC" Geometric center of frame
  - Half of A measurement and Half of B measurement written as coordinate. Ex) 25x16
- "DBC" (Frame PD)= A + DBL

#### LENS DECENTRATION

**Frame Fits Patient** 



**Frame Does Not Fit Patient** 



#### **CALCULATING FRAME DECENTRATION**

FACTS:

• Frame: 54-20

Patient: PD 62

Frame PD 74
Patient PD 62

Divide by 2:6mm decentration each eye

Formula:

(Frame PD - Patient PD)

2

# DECENTRATION TOLERANCE

- 3-4mm in each eye is optimal for both everyday wear and wrap frames.
- 5mm MAX in each eye on Everyday Frames
- 7mm MAX in each eye on Wrap Frames



#### CALCULATING DECENTRATION

■ Frame Size 51/16

■ Patient PD: 60

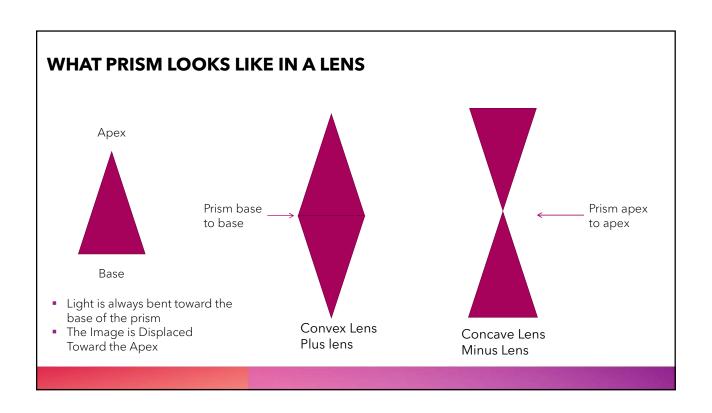
• What is the decentration per eye?

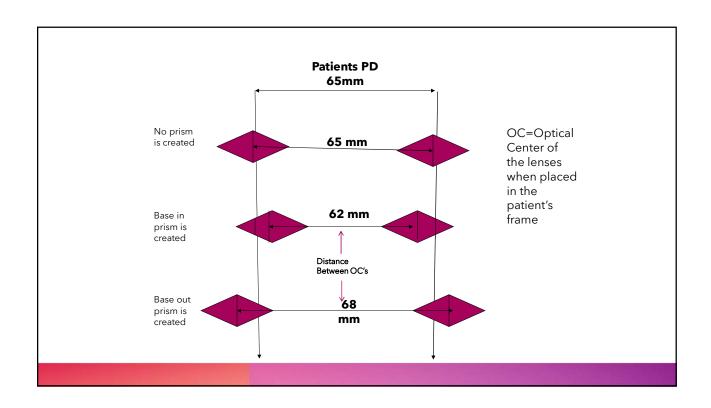
• Frame Size: 54/15

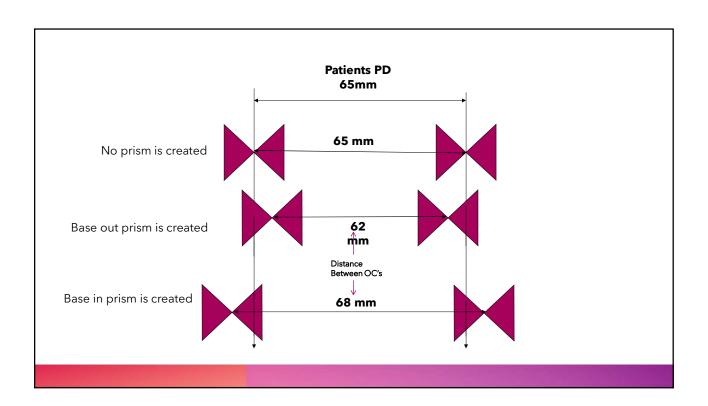
Patient PD 66

• What is the decentration per eye?

# UNDERSTANDING HOW UNWANTED PRISM AFFECTS PATIENTS VISION







# **Prism Direction Cancelling and Compounding**

- Cancelling
  - Base Up and Base Up
  - Base Down and Base Down
  - Base In and Base Out
  - Base Out and Base In
- Compounding
  - Base Up and Base Down
  - Base Down and Base Up
  - Base In and Base In
  - Base Out and Base Out

## PRENTICE'S RULE-HORIZONTAL PRISM

- For horizontal prism, the prism amount is equal to the distance from the optical center to the line of sight in centimeters times the total power in the direction of consideration.
  - (In other words, for consideration of horizontal prism, this distance also means the difference of the OC of the lenses placed in the patient's frame from the patient's actual PDs. This distance is measured in millimeters, then changed to centimeters for the calculation below.)

#### Prism = Distance in Centimeters x Power

• (Distance in Centimeters = Distance in mm X .1. This can also be accomplished by moving the decimal one place to the left).

#### PRENTICE'S RULE-HORIZONTAL PRISM

\*\*\* You may have seen the Prentice Rule displayed elsewhere as:

Prism = Power x Distance in mm

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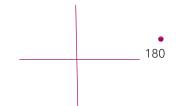
This gives the same result as:

Prism = Power x Distance in cm

(We are using this formula in our calculations.)

### **Horizontal Prism**

 If there is a patient with astigmatism, as with a majority of prescriptions, the power in the 180 must first be determined when determining horizontal prism.



#### **Horizontal Prism**

OD -1.00 -.50 x 90

- For the right lens, the full power of the lens at the 180 is -1.50.
- Remember that none of the cylinder power is evident at the axis, and 100% of the cylinder power is evident 90 degrees from the axis.
- So, for the OD, the power at the 90 is -1.00, and is -1.50 at the 180.
- The power we would use when calculating horizontal prism is -1.50 (which is the power at the 180 axis)

OS -2.00 -1.00 x 180

- For the left lens, the full power of the lens at the 180 is -2.00
- Remember that none of the cylinder power is evident at the axis. The axis is 180, so the 180 is where just the sphere power is evident.
- The power we would use in calculating horizontal prism is -2.00 (which is the power at the 180 axis)

## ANSI Standards - horizontal prism

- For Single Vision and lined bifocals
- For powers up to (+ or -) 2.75 -no greater than  $.67^{\triangle}$  total
- For powers over (+ or -) 2.75 -no greater than 2.5 mm total from specified PD distance
- For Progressive lenses
- For powers up to (+ or -) 3.75 -no greater than .67  $\stackrel{\blacktriangle}{}$  total
- For powers over (+ or -) 3.75-no greater than 1 mm from specified monocular PDs

# Example # 1

What is the prism per eye for this single vision lens? Is this within tolerance?

- R = +2.00 D Sphere
- L = +2.50 D Sphere
- Patient's PD = 60 mm
- OC's Measure = 66 mm

(That is to say, the distance measured from the OC of the left lens to the OC of the right lens is 66mm.)

- 1. Determine OC decentration and direction.
  - OC 66 mm
  - -PD 60 mm
  - DEC 6 mm
  - (3 mm per eye)
- (This 3 mm figure is the distance between the OC and PD in each eye.)

# Example #1 (continued)

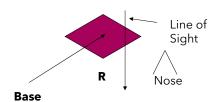
- 2. Convert #1 to centimeters.
- 3 mm = .3 cm
- 3. Determine total power in the direction of consideration.
- (+2.00 D)
- 4. Calculate Prism Amount

P = Distance in cm x Power

P = .3 cm x + 2.00 D

P = .6

Determine Prism Direction (BO)



# Example #1 (continued)

- 6. Left Eye
- -+2.50 D
- PD 60 mm
- OC 66 mm
- .3 cm x 2.5

Answer

■ .75 A BO

Is it within Tolerance?

# Example #1 (continued)

- This is a single vision lens
- We are looking at horizontal prism
- The prism is (OD) .6 BO + (OS) .75 BO = (Total 1.35)
- The prism allowed is .67
- 1.35 > .67 so this would <u>not</u> be within tolerance.

# Example # 2

What is the prism per eye for this single vision lens? Is this within tolerance?

- R = +2.00 -1.00 x 90
- L = +2.50 -1.00 x 180
- Patient's PD = 58 mm
- OC's Measure = 62 mm

- 1. Determine OC decentration and direction.
  - OC 62 mm
  - -PD 58 mm
  - DEC 4 mm
  - (2 mm per eye)
- (This 2 mm figure is the distance between the OC and PD in each eye.)

# Example #2 (continued)

2. Convert #1 to centimeters.

2 mm = .2 cm

3. Determine total power in the direction of consideration.

R:+2.00 -1.00 x 180

L: +2.50 -1.00 x 180

R: +2.00+-1.00= +1.00

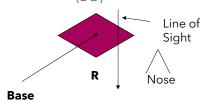
L: +2.50

- 4. Calculate Prism Amount Right Eye
- P = Distance in cm x Power(180)

P = .2 cm x + 1.00 D

P = .2

5. Determine Prism Direction (BO)



# Example #2 (continued)

6. Left Eye

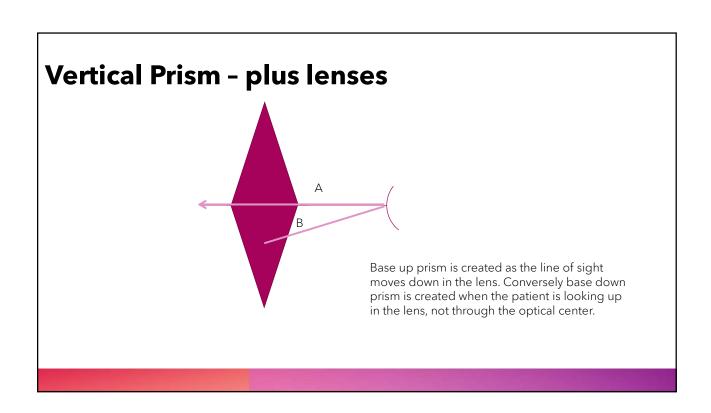
(Distance in cm x Power in(180)

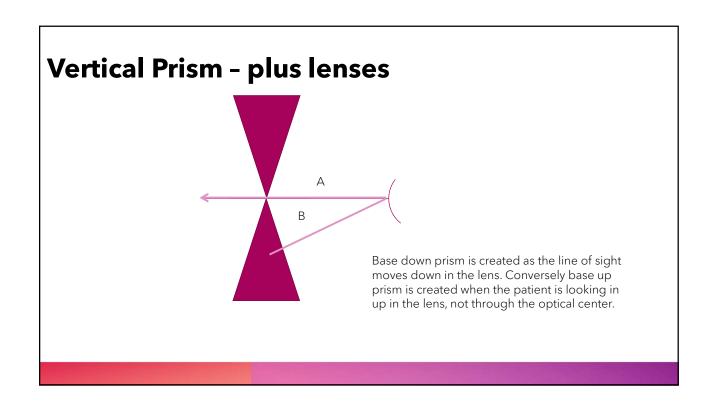
■ .2 x +2.50= .5

7. Determine Total Prismatic Imbalance

OD .2 BO+ OS .5 BO= .7 BO OS

.7> .67 outside of tolerance and should be sent back to the lab.





## **Prentice Rule- Vertical Prism**

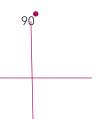
- For vertical prism, the prism amount is equal to the distance from the OC to the line of sight in centimeters times the total power in the direction of consideration.
  - (In other words, this distance also means the difference of the OC of the lenses from the patients vertical line of sight)

#### Prism = Distance in Centimeters x Power

• (Distance in Centimeters = Distance in mm X.1. This can also be accomplished by moving the decimal one place to the left).

## **Vertical Prism**

• If there is a person with astigmatism, as most prescriptions, the power at the 90 must first be determined.



### **Vertical Prism**

- OD -1.00 -.50 x 90
- -For the right lens, the full power of the lens at the 180 is -1.50. [This is -1.00 (+) -.50]
- -Remember that none of the cylinder power is evident at the axis, and 100% of the cylinder power is evident 90 degrees from the axis.
- So, for the OD the power at the 90 is
- **-**1.00.
- The power we would use when calculating Vertical prism is -1.00 (The power at 90 degrees)

- OS -2.00 -1.00 x 180
- -For the left lens, the full power of the lens at the 180 is -2.00
- Remember that none of the cylinder power is evident at the axis. The axis is 180. so the 180 is where just the sphere power is evident.
- -The power at the 90 is the sphere plus the cylinder (-3.00)
- -The power we would use in calculating vertical prism is -3.00 (the power at the 90)

## ANSI Standards - Vertical prism

- For Single Vision and lined bifocals
- For powers up to (+ or -) 3.375 -no greater than  $.33^{\blacktriangle}$  total
- For powers over (+ or -) 3.375 -no greater than 1 mm difference in height of PRPs
- For Progressive lenses
- For powers up to (+ or -) 3.375 -no greater than .33  $\stackrel{\blacktriangle}{-}$  total
- For powers over (+ or -) 3.375 -no greater than 1 mm difference in height of PRPs
- (Also, for progressive lenses and lined bifocals, the seg. ht. must be within one mm of what is requested.)

# Example # 1

What is the prism per eye for this single vision lens? Is this within tolerance?

- R = -2.00 -1.00 x 90
- L = -2.50 -0.25 x 180
- Patient is looking 3 mm above the OC
- Determine the Distance and Convert to Centimeters
   Distance from Optical Center is 3mm=.3cm

# Example #1 (continued)

2. Determine total power in the direction of consideration(90)

R:-2.00 -1.00 x 90

L: -2.50 -0.25 x 180

R: -2.00

L: -2.50 + -0.25 = -2.25

4. Calculate Prism Amount Right Eye

P = Distance in cm x Power(90)

P = .3 cm x - 2.00 D

P = .6

5. Determine Prism Direction





Base

## Example #1 (continued)

6. Left Eye

(Distance in cm x Power in(90)

- .3 x -2.25= .675 BU
- 7. Determine Total Prismatic Imbalance

OD .6 BU+ OS .675 BU= .075 BU OS (Base Up and Base Up Prism Cancel Out)

.075 < .33 within tolerance

# EFFECTS OF PRISM - TROUBLESHOOTING GUIDE

- Excessive Base Down Prism
  - Horizontal lines (the floor) appear to be concave as if you are standing in a bowl
  - Vertical objects (people) appear taller
  - You will feel like you are walking uphill
- Excessive base up prism
  - Horizontal lines will appear convex, as if you are standing on a hill
  - Vertical objects appear shorter
  - You will feel like you are walking downhill
- Excessive base in or out
  - Objects appear asymmetrical. High on one side, low on the other. High side will be toward the base

