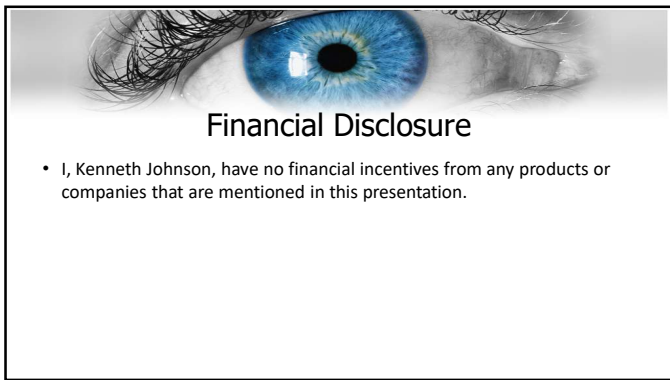



1



2




3



Introduction




4



Learning Objectives

- After completing this course, the student should be able to identify the most common vision complaints, uncover the main reason for these complaints, patient communication, communication with the doctor, the importance of proper adjustments, and how to possibly prevent issues before they become a problem.

5



Poll Question 1

- Do you like troubleshooting?

6




7



8




9




Definitely Blurry?

- If a patient responds that it is definitely blurry, the next thing I would do is a "position test."




10




Physiologic Reasons?

- Cataracts
- Dry Eyes
- Solar Eclipses?




11




For all glasses

- Check how the glasses are on the patient




12



Do the lenses line up properly?

- If SV, double check pds (monocularly)
- Check Ocs
- Check seg heights
- Are the lenses cut eye for eye?


13



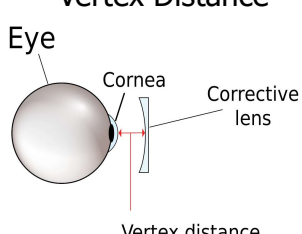
3 Typical Adjustments

- When in doubt, there are three magic adjustments that will help alleviate peripheral distortion:
 - • Decrease vertex distance
 - • Increase pantoscopic tilt
 - • Increase face form/wrap

14



Vertex Distance



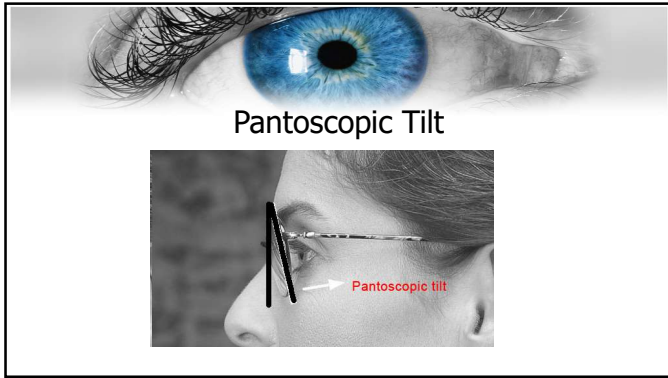
Eye

Cornea

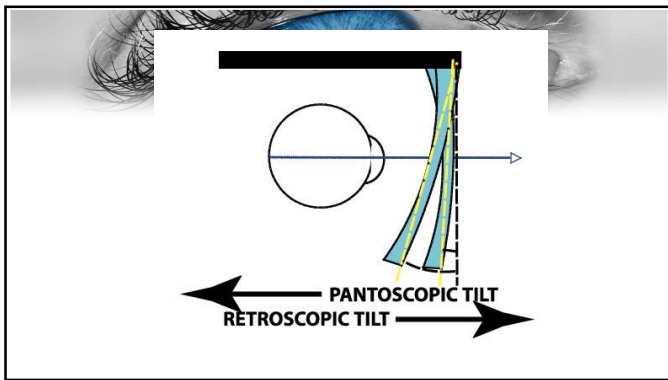
Corrective lens

Vertex distance

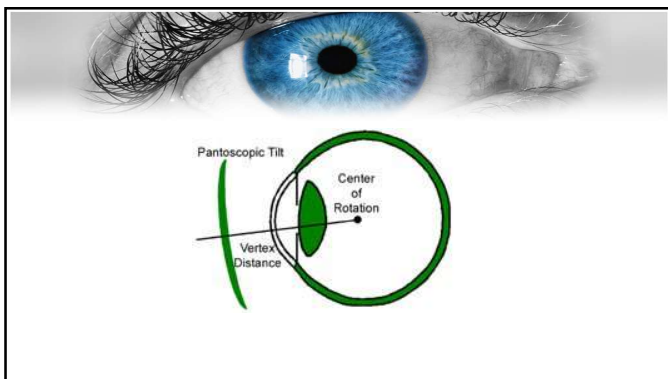
15



16



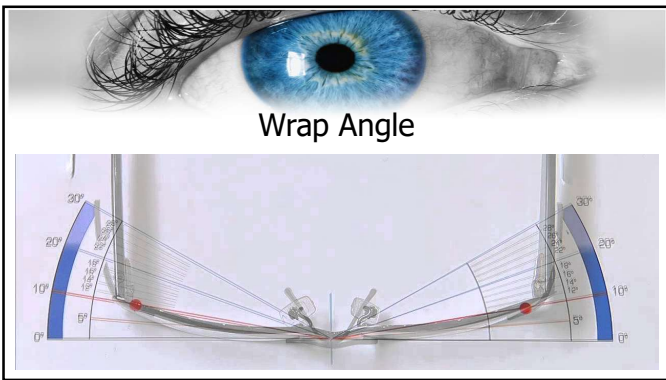
17



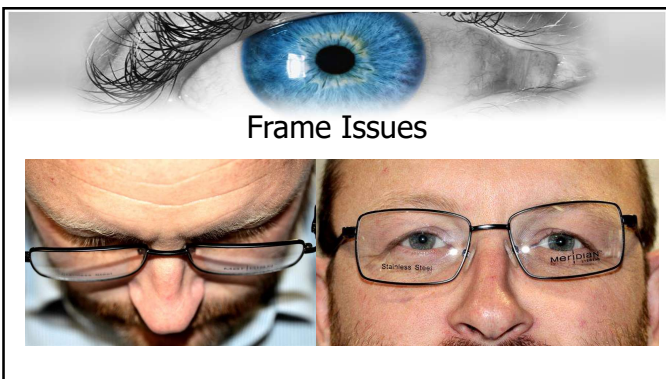
18



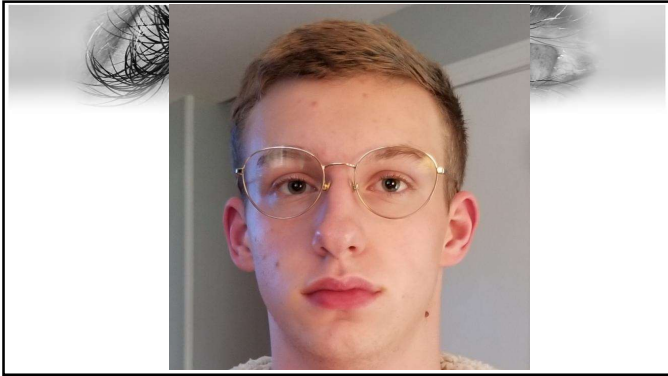
19



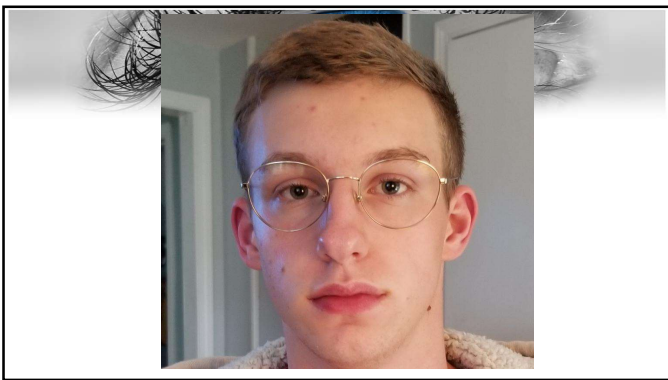
20



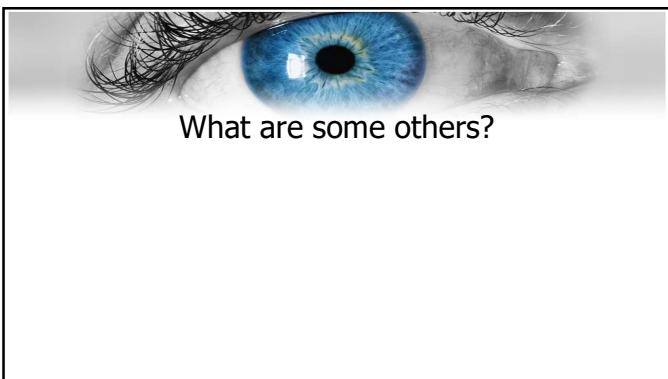
21




22



23




24



Poll Question 2


- Do you have co-workers that the first thing they do when someone has an issue is to just remake the glasses or do an Rx check?

25




Should they see the doc?

- Not yet
- Have them bring in their old glasses (all pairs)



26



Is it time to have an Rx Check?

- Compare old to new
- Is there a big change?

NEW ENGLAND EYE INSTITUTE
1220 Boylston Street
Boston, Massachusetts 02115
Tel: (617) 262-2000
TDD: (617) 256-4599

SPECTACLE PRESCRIPTION ONLY

FOR: Daniel Smith DATE: 10/3/24

ADDRESS: _____

Rx	SPHERICAL	CYLINDRICAL	AXIS	PRISM	BASE
D.V.	<u>-3.25</u>	<u>-25</u>	<u>180</u>		
D.S.	<u>+1.50</u>	<u>-1.00</u>			
N.V.	<u>+2.00</u>	<u>ADD</u>			
D.C.	<u>+2.00</u>				

REMARKS: _____ P.D. _____

DATE OF EXAM: 10/13/24 EXPIRATION DATE: _____

DR: [Signature] LIC. # 3792

27

NEW ENGLAND EYE INSTITUTE
 125 Boylston Street
 Boston, Massachusetts 02215
 Tel. (617) 262-2020
 TDD (617) 236-4600

SPECTACLE PRESCRIPTION ONLY

FOR Daniel Smith DATE 10/3/94

ADDRESS _____


Rx		SPHERICAL	CYLINDRICAL	AXIS	PRISM	BASE
D.V.	O.D.	-3.25	-25	130		
	O.S.	+1.50	-1.00	90		
N.V.	O.D.	+2.00	ADD			
	O.S.	+2.00				

REMARKS _____ P.D. 1

DATE OF EXAM 10/3/94 EXPIRATION DATE _____

DR. X. Ghobad LIC. # 3775

28



Is it time to have an Rx Check?

- Check the Medical Records, if possible.
- Look for possible errors in the transcription.

29




What is the biggest error you have ever seen?



https://www.youtube.com/watch?v=...
 MakeAGIF.com

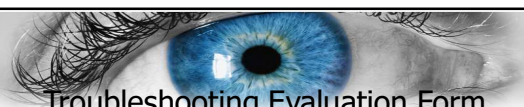
30



Is it time to have an Rx Check?

- Review with the doctor.
- Is there a medical reason they can't see?

31



Troubleshooting Evaluation Form

- Having a checklist can be helpful.
- Is there a big change in Rx? Y/N
- Are the base curves similar? Y/N
- Is the lens style changed? Y/N
- Has the frame size changed Y/N
- Are the pd's the same Y/N
- Is the O.C. in the same location? Y/N
- Is the Vertex the same? Y/N
- Is the Lens material the same? Y/N

32




Getting all the facts

- What is the real complaint
- Listen carefully
- Is this all the time or just in certain situations?




33



Getting all the facts

- When was the exam/refraction done?
Patient may have had an exam recently but the refraction was done 2 years ago.



34




Getting all the facts

- What are the glasses being used for?
– Sounds simple, but....




35




Getting all the facts

- What was the last material they had in their glasses?
– Some people are very sensitive to material changes.




36




Getting all the facts

- Does the person not like the frame?




37



Poll Question 3

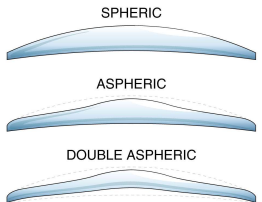
Is there a common issue in your office that comes up a lot?

38



New Lens Designs

- Is this a Free-Form lens design?
- Aspheric?
- Is it positioned correctly?

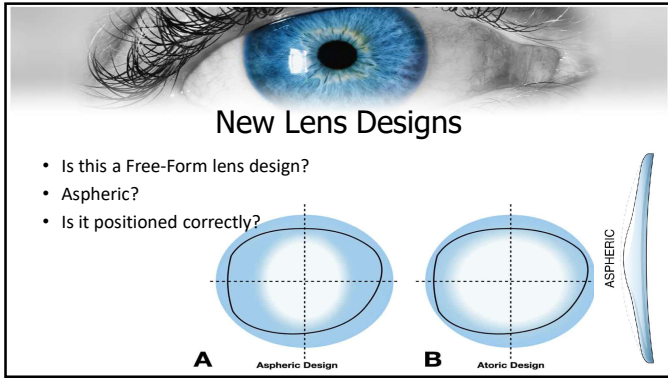


SPHERIC

ASPHERIC

DOUBLE ASPHERIC

39



New Lens Designs

- Is this a Free-Form lens design?
- Aspheric?
- Is it positioned correctly?

A Aspheric Design **B** Atoric Design

ASPHERIC

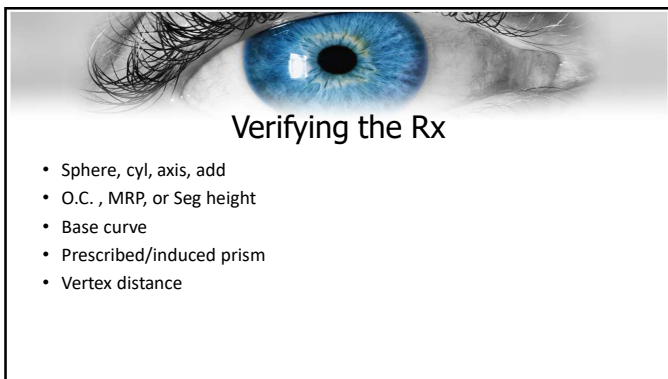
40



New Multifocal Wearer?

- Is this their first multifocal?
 - Check the positioning
 - Is there now induced prism at reading level?
 - Is it all time or just after a long day?


41



Verifying the Rx

- Sphere, cyl, axis, add
- O.C. , MRP, or Seg height
- Base curve
- Prescribed/induced prism
- Vertex distance


42



Know ANSI Tolerances

- Sounds obvious but...

43



Physical Limitations

- Diabetes
- Macular Degeneration
- Cataracts
- Recent surgeries
- Recent injuries

44




Chemical Changes

- Changes in medications
- Hormone changes
- Steroids
- Pregnancy




45




Properly Adjusted?

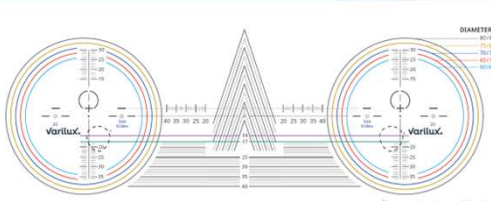
- Check for x-ing
- Pantoscopic tilt
- Nose pads
- Temple length
- Co-planar
- Vertex distance
- Face-Form



46


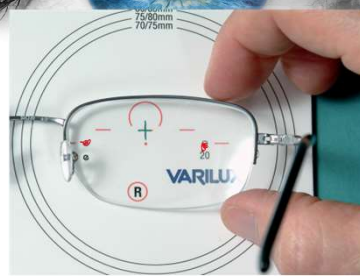


- Progressive layout char



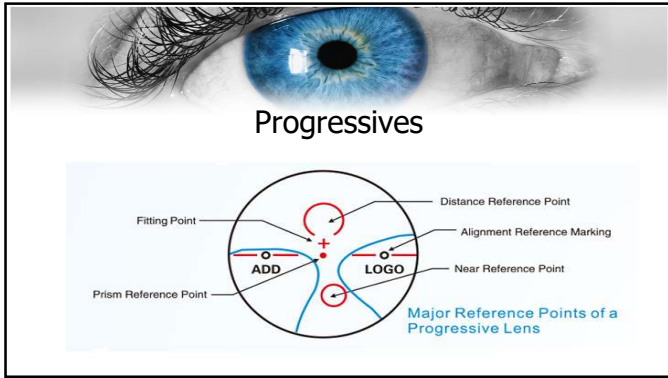
Optometric copy this product may availability depend
 location of your store and the product variety
 may vary with the quality.

47

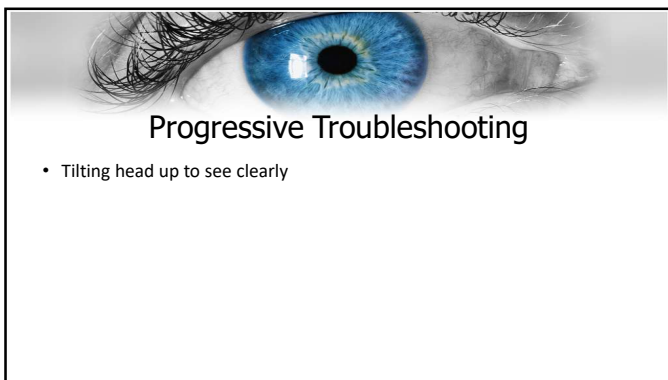



75/50mm
 70/75mm

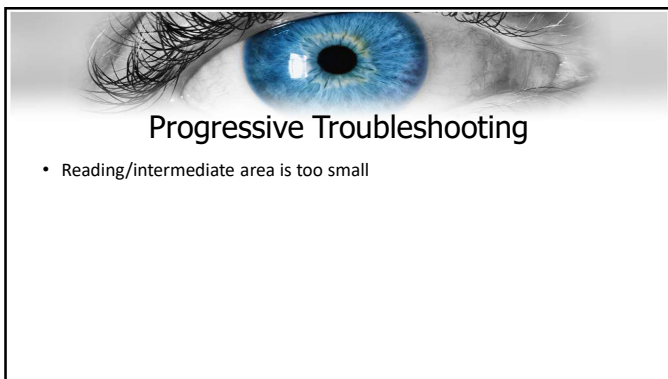
48




49



50




51



Progressive Troubleshooting

- I get a “swimming” sensation when I move my head.


52



Progressive Troubleshooting


- Let’s say that a progressive lens wearer comes in complaining that, while her vision is good in the distance, she must hold reading material to the extreme left.
 - What is likely the problem?

53



Example

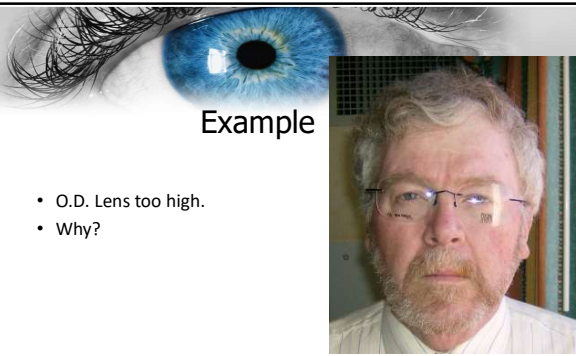
- Bridge is skewed?
- Temple Angle off?
- Both?



54

Example

- O.D. Lens too high.
- Why?



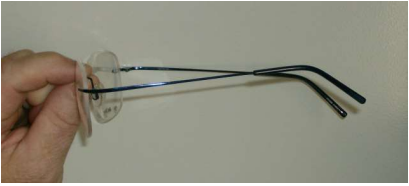
55



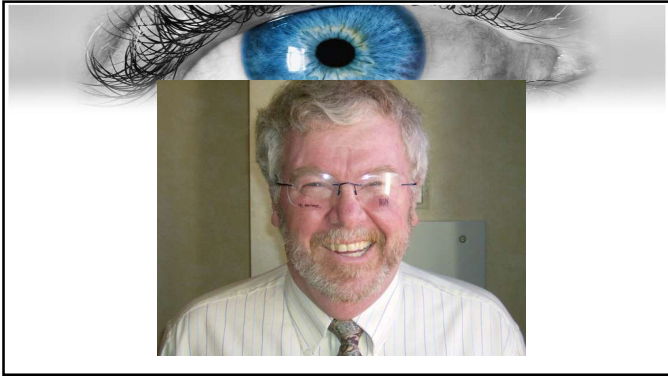
56

Properly Adjusted?

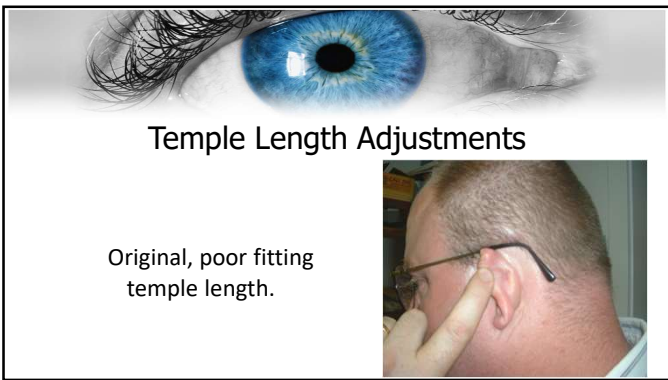
- Xing or temple angles
- Example:



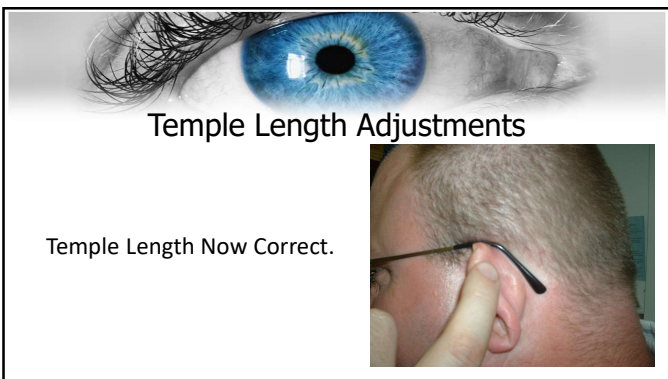
57




58



59



60



Properly Adjusted?

- Nose pads
 - Example:

61




Buyer's Remorse


- Did they get "talked" into a particular frame?
- Found out after the fact they have "insurance."
- Spouse said they paid too much money.



62




63



Poll Question 4

Should we stand up and stretch our legs?


64



Reducing Re-makes

- If major issue is found, don't stop looking for other issues.
- There may be more than one reason!


65



Tips: What Not To Say

- Your lab made an error
- The doctor made an error
- The optician measured you wrong
- The dog ate the lab order


66



Tips: What To Say


- “I noticed you are very tall, I will compensate the position of the lenses to fit your unique situation.”
- “ I noticed your head posture when reading, I will remake them to accommodate your individual needs.”
- “ You hold your reading material a bit different than the average person. I will re-calculate to fit your individual needs.”

67




Is it time for a Doctor Intervention?

- After all else fails, it may be time to get the doctor involved.



68



Poll Question 5

Have you ever had a co-worker throw you under the bus?


69



What about contacts?



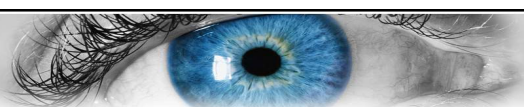
70



Quiz time

- O.D. +1.50
- O.S. + 2.00
- P.D. Supposed to be 33/33
- Made at 31/31
- What is the prism?


71



Quiz time

- O.D. +1.50 $1.5 \times 2 = 3$ *Divide 3/10 = 0.3*
- O.S. + 2.00
- P.D. Supposed to be 33/33 $2.0 \times 2 = 4$ *Divide 4/10 = 0.4*
- Made at 31/31
- What is the prism? *Add 0.3 + 0.4 = 0.7*


72



Problem Solving: Conditions

- Anisometropia
- Antimetropia

73



What is a considered a Strong Power for a Lens?

- Unfortunately, although strong lenses are mentioned in A.N.S.I., there is no clear definition of them.

74




Optical Aberrations Lens Design Factors – They Control How We See




Figure 1

75




Optical Aberrations in Lenses

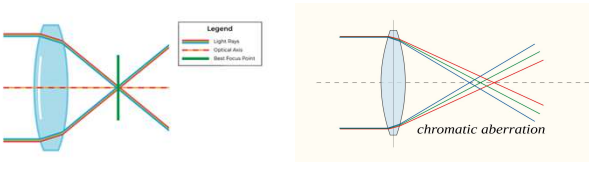
- The creation of a blurred or distorted images due to the physical properties of a lens or lens material.



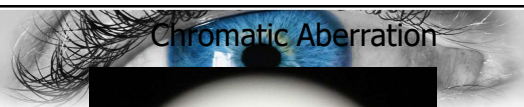
76



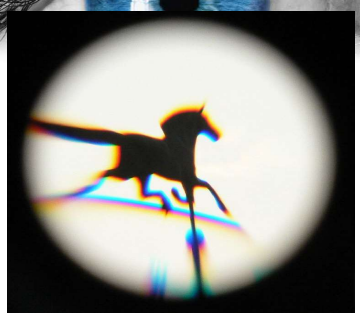
Chromatic Aberration




77



Chromatic Aberration




78



Poll Question

- Do you sell a lot of Polycarbonate?
- A: Yes
- B: No
- C: Mostly only for children

79



Anisometropia

- Marked difference in power between both eyes.
 - Example -1.00 O.D. and -3.50 O.S.
- May cause problems at near point.
- May cause problems in the distance if lenses are not centered vertically.
- Why?

80




Anisometropia: Causes


- May be congenital.
- May develop gradually in the progression of ametropia.
- May appear suddenly following disease or surgery.



81




Anisometropia: Symptoms




- Discomfort due to:
 - a: headaches
 - b: burning
 - c: photophobia
 - d: pulling
 - e: fatigue
- Nausea or dizziness

82




Anisometropia: Symptoms



- Intermittent double vision, relieved by closing one eye.
- Complaints often express what patient *feels* rather than what they *see*.

83




Antimetropia

- Antimetropia: Difference in refractive errors resulting in two different image sizes.

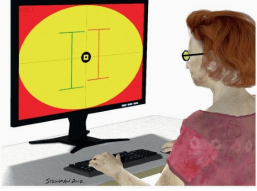
Example: O.D. +1.75 -0.25 x 180
O.S. -1.50 -0.50 x 175

84

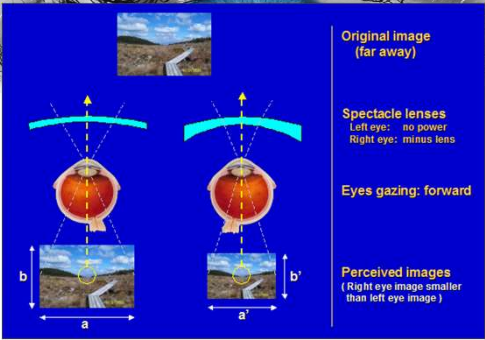


Aniseikonia

- Aniseikonia: difference in retinal image sizes between two eyes. Induced by spectacles.



85



Original image (far away)


Spectacle lenses
Left eye: no power
Right eye: minus lens

Eyes gazing: forward

Perceived images
(Right eye image smaller than left eye image)

a a' b b'


86



Visual Discomfort Due To:

- Unequal retinal image size.
- Unequal prism amount at near point.
- Unequal focus.


87



Vertical Imbalance Problems

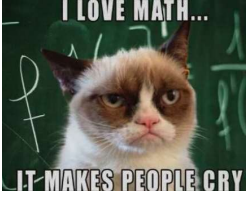
- Anisometropia causes vertical imbalance when looking away from the optical center.
- Rx's with differences of power in the 90th meridian create opposite or unequal amounts of prism at the reading level.

88




Poll Question 6

Do you love doing optical math?




89



Real Life Troubleshooting

- Patient complains of an uneasiness compared to his last pair. (SV Reading)
- His old Rx: +2.00 -2.50 X 180/+2.00-2.25 X 180
- New Rx: +2.50 – 2.75 X 175/+ 2.50 – 2.50 X 165
- Wearing PD (old): 62, New 66 (accurate to patient)
- What may be the issue?


90



Real Life Troubleshooting

- Patient recently had cataract surgery in O.D. only.
- Unknown last pair ft 28s (he was advised by his doctor that he would never need glasses again).SMH
- Rx:-0.50-0.50 x 180
- +1.25-0.75 X 090
- Add +2.50 o.u.
- Having issues reading
- Why?


91



Real Life Troubleshooting


- Patient recently had cataract surgery in O.D. only.
- Unknown last pair ft 28s (he was advised by his doctor that he would never need glasses again). *Power at 90 = -1.00*
- Rx:-0.50-0.50 x 180 *Power at 90 = +1.25*
- +1.25-0.75 X 090
- Add +2.50 o.u. *1.0 x 10mm/10 = 1 BD*
- Having issues reading *1.25 x 10mm/10 = 1.25 BU*
- Why? *Total prism = 2.25*

92



Real Life Troubleshooting

- 20 year old changing frames to a larger frame purchased online.
- Rx staying the same
- Rx is -1.00-2.00x 135/ -1.00 -2.50 x 45
- Original frame is A:48 B: 32 DBL 18
- New Frame is A: 54 B:46 DBL 18
- Patient seeing double
- What are the possibilities?



93




Other Troubleshooting

- What have you encountered lately?
- Let's discuss this and troubleshoot it.




94




Prevention

- Analyze Rx (old and new)
- Analyze previous glasses
- Proper frame selection
- Proper measurements
- Discussing what to expect




95




Poll Question 7

Do you feel a little bit more confident on troubleshooting?


96



Questions and Answer Time




97



Poll Question 8

Do you want to go another 2 hours on this subject?

98



Final Thoughts

- In conclusion, the student should have an understanding of how to troubleshoot when their patients have issues with their glasses and how to resolve them.

99



100