

Slide 1

**Advanced Dispensing for
Paraoptometric Assistants**

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Alex Yoho, ABOM

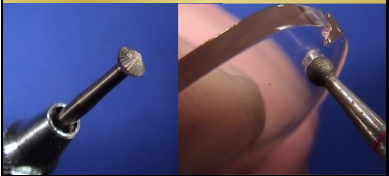
Slide 2

Working with Rimless

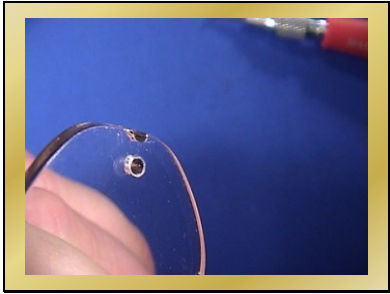
Slide 3

Lab Work For Rimless Eyewear
Drilling

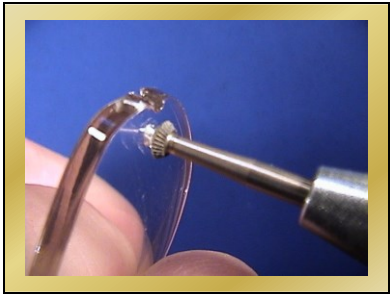
- Finishing the hole



Slide 4



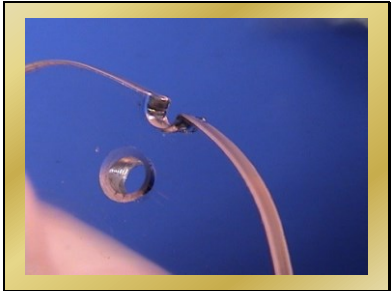
Slide 5



Slide 6



Slide 7

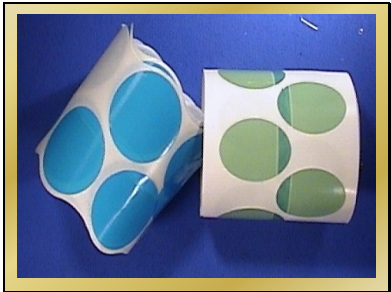


Slide 8

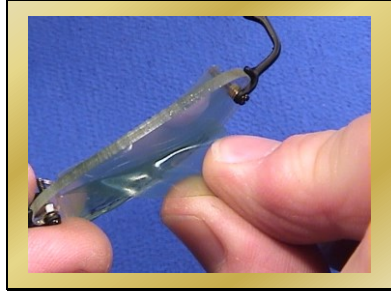
Protecting the lens

- Rimless frames often have exotic lenses
- Lens tapes are a good bet
- Clean hands
- Clean bench

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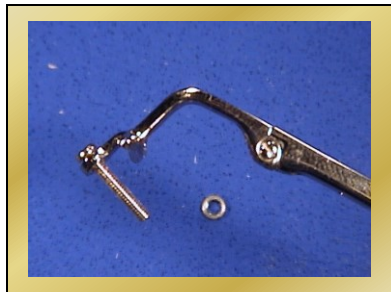


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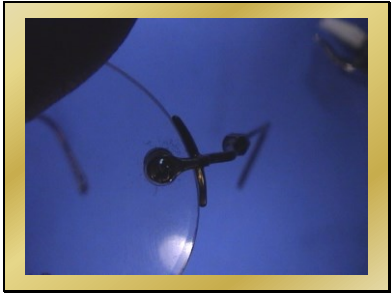
Mounting techniques

- Be sure strap is bent properly
- Proper hardware sequence
- First protect the lens (Top Hat Washers)
- Then protect the protectors (Metal Washers)
- Locknuts or Loc-tite
- Finishing the nut or cap nut

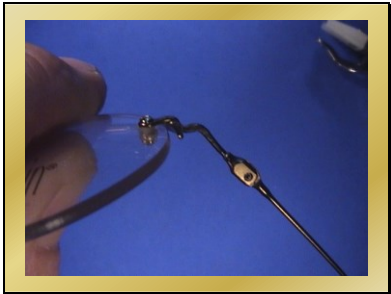
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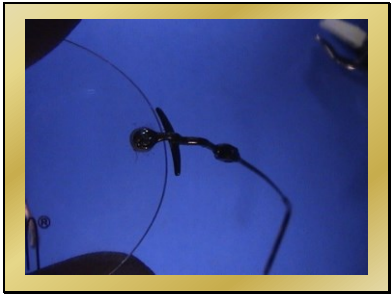
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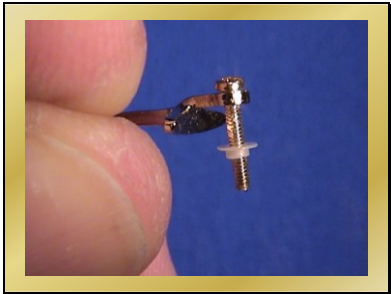
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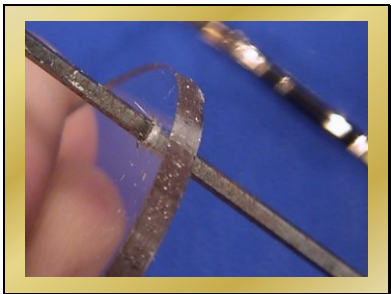
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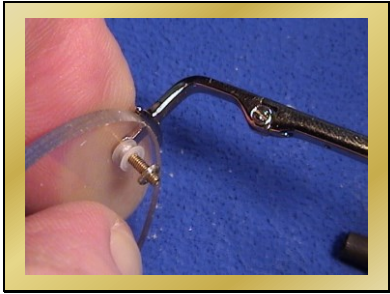
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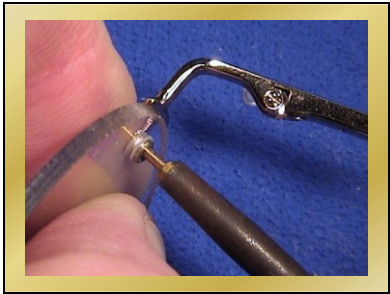
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Slide 19



Slide 20



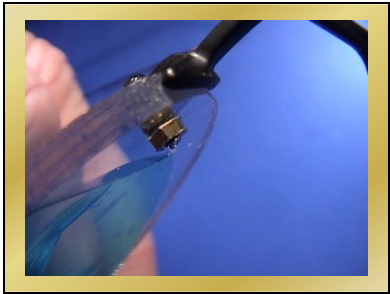
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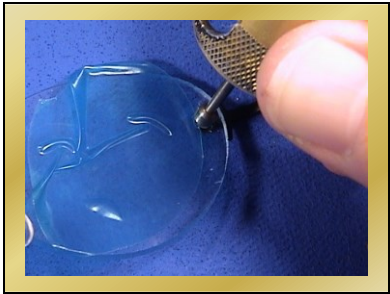
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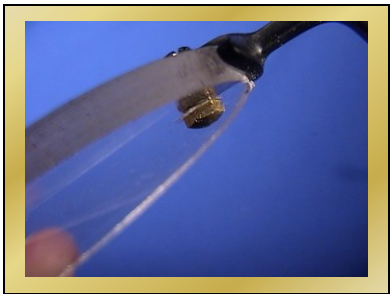
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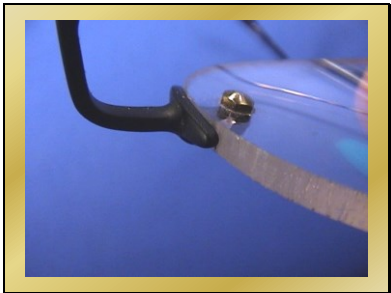
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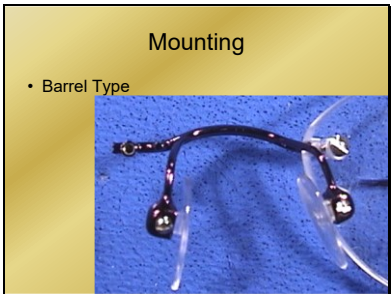
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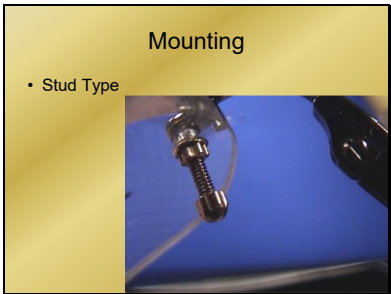
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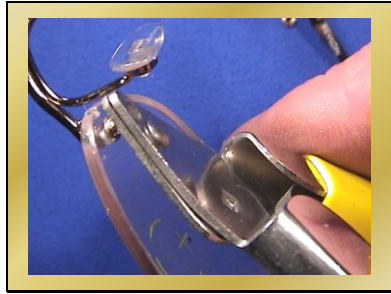
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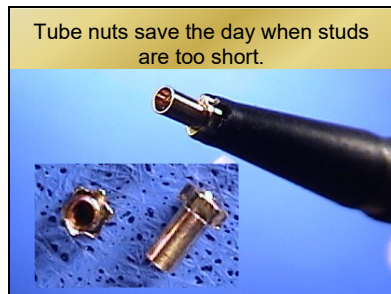
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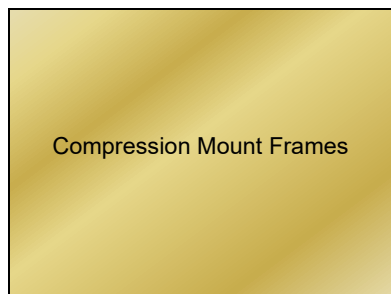
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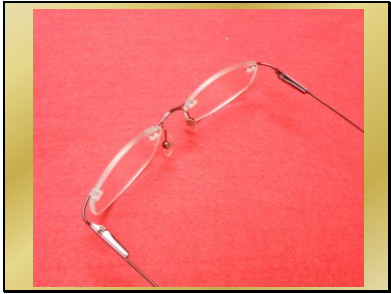
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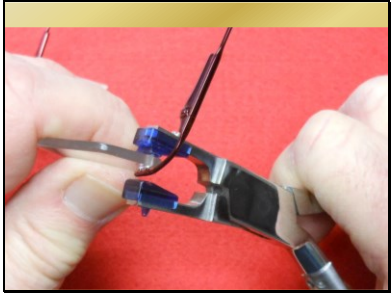
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Slide 35



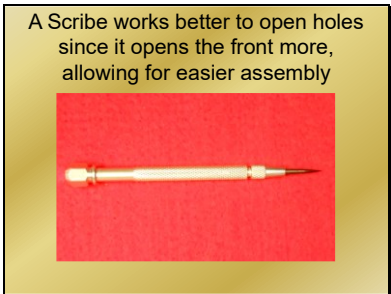
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Slide 37



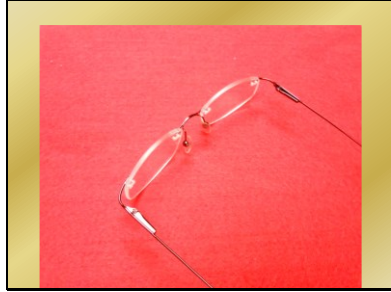
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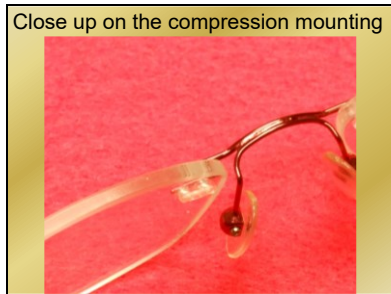
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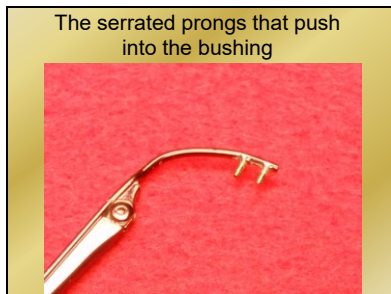
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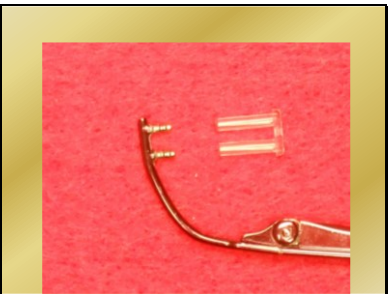
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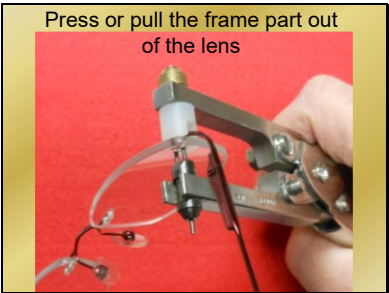
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Slide 46



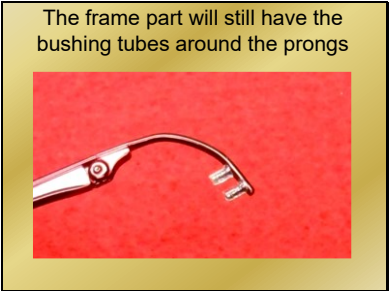
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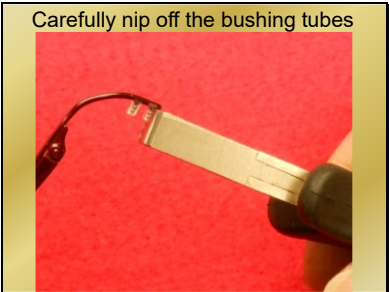
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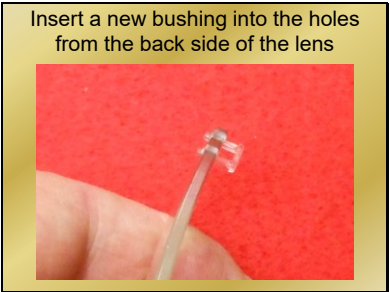
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Slide 50



Slide 51



Slide 52

Lightly grip the ends of the tubes and pull the strap tightly against the lens while pushing the strap against the lens



Slide 53

Keeping the cutter edges close to the tubes, slide the cutters to the front of the lens and cut the tubes

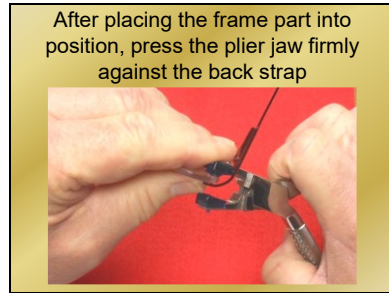


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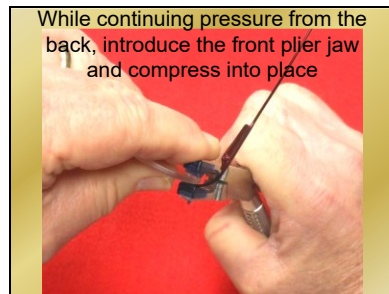
Open the crushed ends of the tubes with a scribe and aggressively wallow out the front



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Slide 56



Slide 57



Slide 58



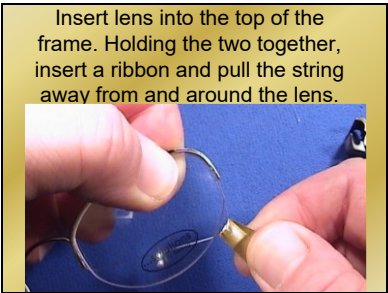
Slide 59



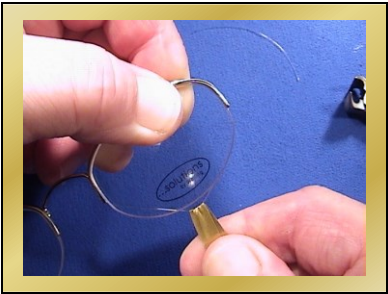
Slide 60



Slide 61



Slide 62

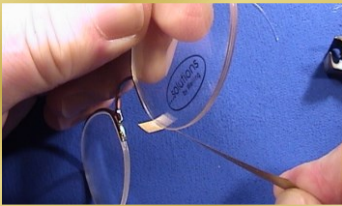


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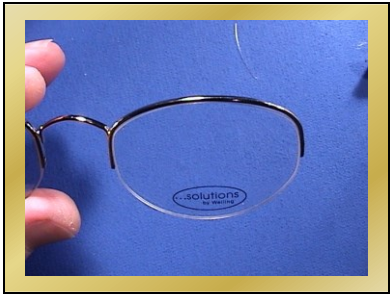


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When the string pops into the groove, pull one side of the ribbon to remove it.



Slide 65



Slide 66



Slide 67



Slide 68

Customizing for Security

- Temple tip modifications
- Extension tips for more "hook"
- Cable makers
- Permanent straps and harnesses
- Switching to silicone Pads & Tips

Slide 69

Customizing eyewear for special patient needs and comfort

- unusual facial characteristics requiring special frame reconditioning for visual and physical comfort.

Slide 70

Customizing for Extraordinary Needs

- Ptosis crutch
- Moisture chambers
- Wind protection
- Incorporating low vision aids
- Occlusion methods



Cheek Lifts
Clear

Slide 71

Ptosis Crutch on Metal Frame



Slide 72

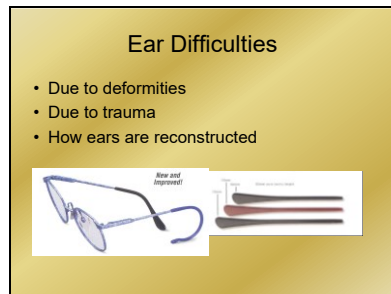
A Soft Shield and Occluded Lens



Slide 73



Slide 74



Slide 75



Slide 76

Snuggle Wraps

- Used with
the baby
in the
car
- Challenge
• Used for
the baby
in the
car
- Challenge
• Used for
the baby
in the
car
- Challenge
• Used for
the baby
in the
car



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Chico, NC 28712

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Reconstruction of traumatic ear deformity



Preoperative

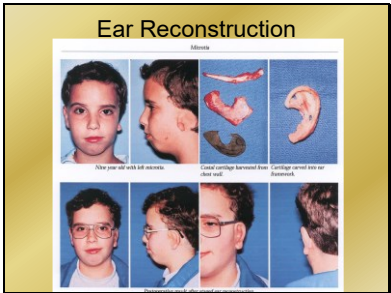
Postoperative

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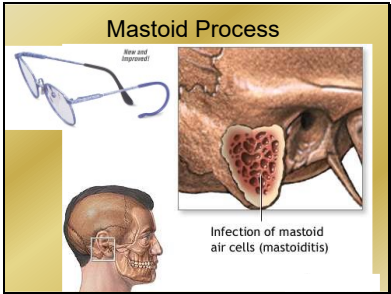
Nose Difficulties

**Warning Graphic
Surgical Photos**

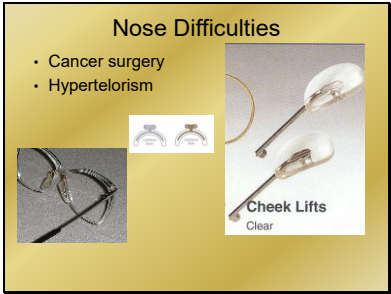
Slide 79



Slide 80



Slide 81



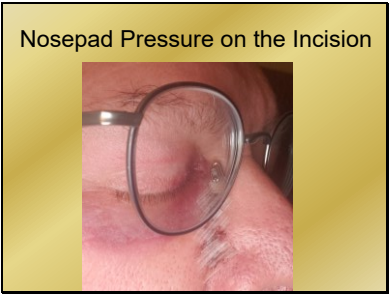
Slide 82



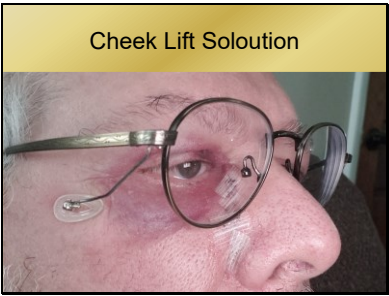
Slide 83



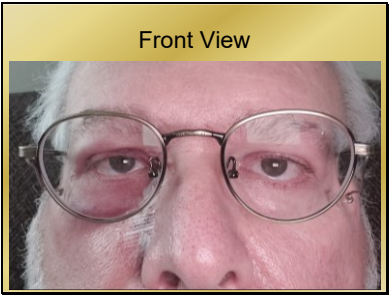
Slide 84



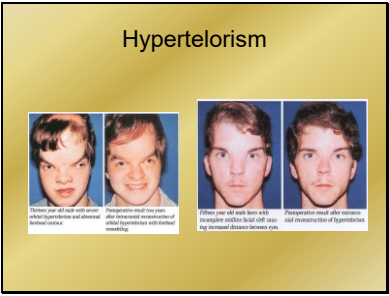
Slide 85



Slide 86



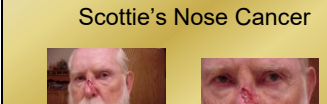
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Slide 88

Slide 89

Scottie's Nose Cancer



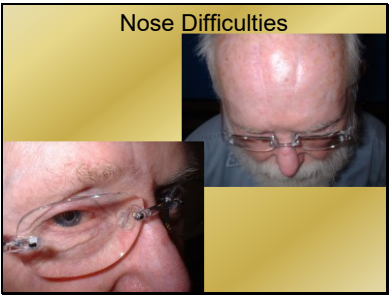
The four photographs show the progression of a large, red, fleshy tumor on the bridge and tip of an elderly man's nose. The tumor is visible in all four images, with varying degrees of growth and surrounding skin changes.

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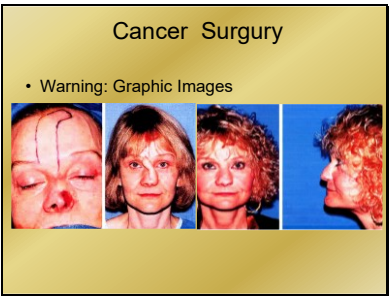
Nose Difficulties



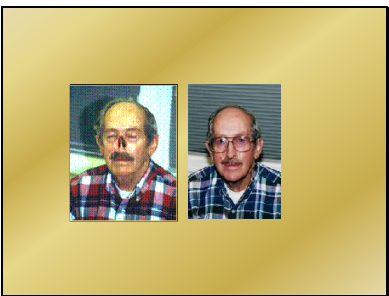
Slide 91



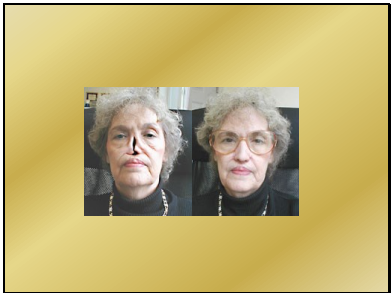
Slide 92



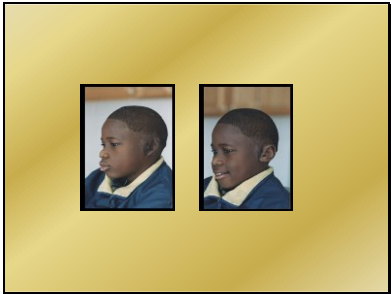
Slide 93



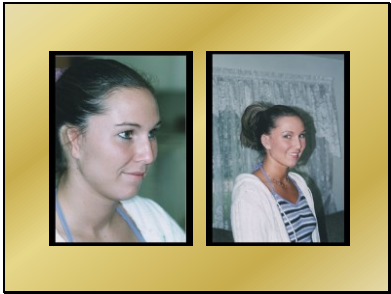
Slide 94



Slide 95



Slide 96



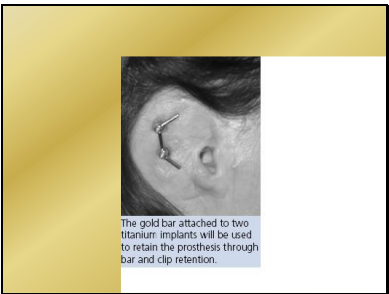
Slide 97



Slide 98



Slide 99



Slide 100



Slide 101



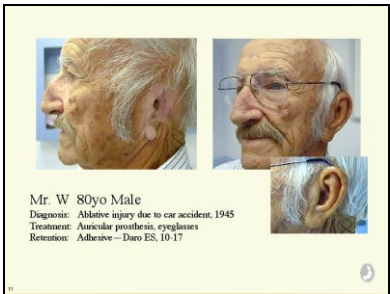
Slide 102



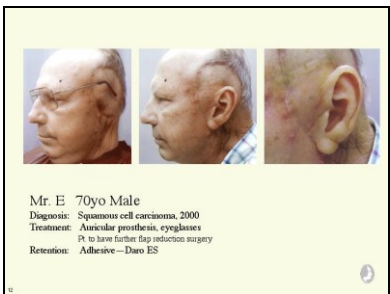
Slide 103



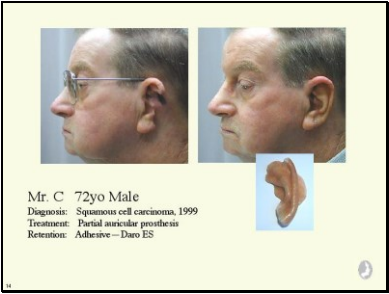
Slide 104



Slide 105



Slide 106



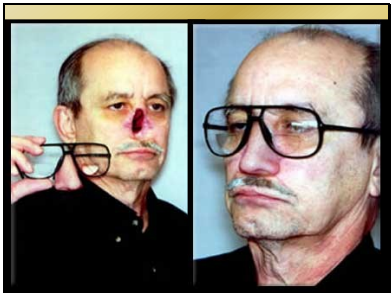
Slide 107



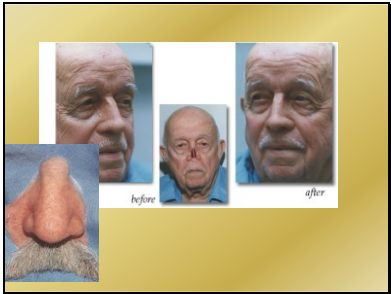
Slide 108



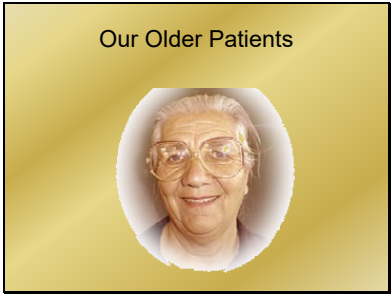
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Slide 110



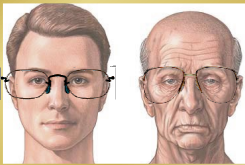
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Slide 112

making eyewear more comfortable
for the aging population

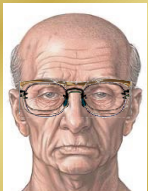
- Looking at new Styles



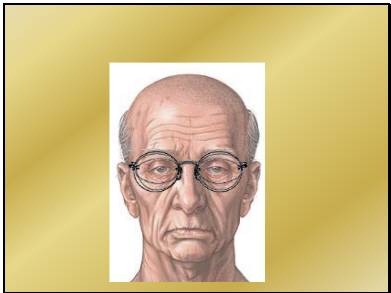
Slide 113



Slide 114



Slide 115



Slide 116

Making eyewear more comfortable for the aging population

- Use smaller pads

This slide features the same illustration of the elderly man's face as Slide 115. To the left of the face is a small inset image showing three different sizes of rectangular eyeglass pads, with the smallest one highlighted to illustrate the recommendation to use smaller pads.

Slide 117

Making eyewear more comfortable for the aging population

- What will keep them from Slipping?

This slide features the same illustration of the elderly man's face as the previous slides. The inset image showing different pad sizes is absent, focusing instead on the question of preventing glasses from slipping.

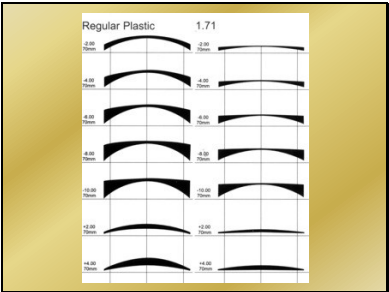
Slide 118



Slide 119



Slide 120



Slide 121

Lenses Evolve!

- We are entering the future now
- Freeform lens processing is addressing problematic lens distortions we have been dealing with since eyewear was first invented.
- Some lens designers are calling this new technology "HD Vision" (High Definition)

Slide 122

Advanced Optics

- Lenses & Aberrations
- The Progressive Power Lens
 - Visual Challenges of PALs
 - Distance
 - Intermediate
 - Near

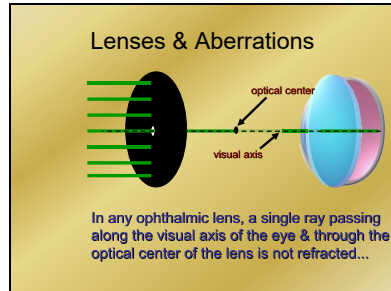
Slide 123

Lenses & Aberrations

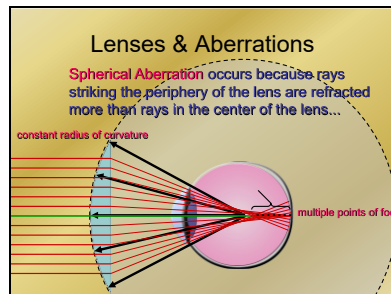
- Spherical Aberration
- Distortion
- Marginal Astigmatism
- Coma



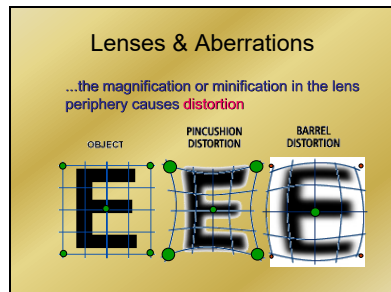
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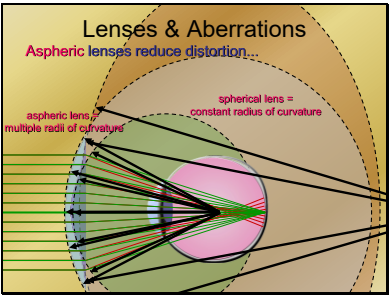
Slide 125



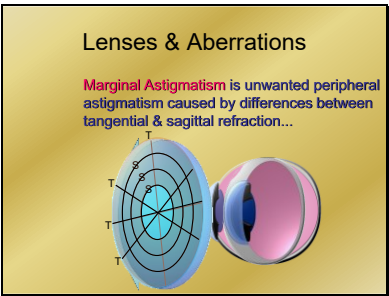
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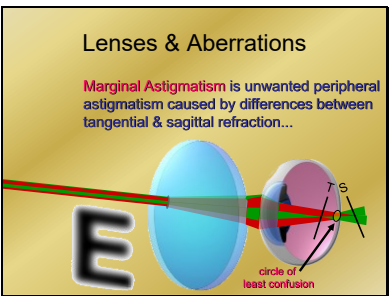
Slide 127



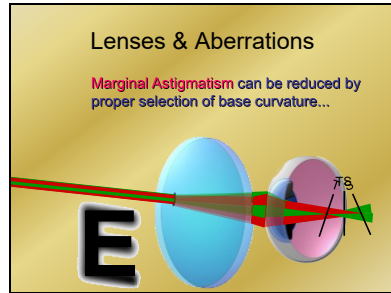
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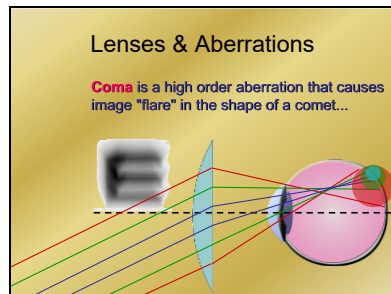
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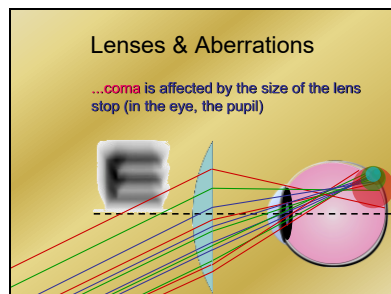
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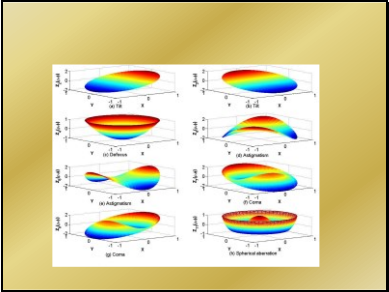
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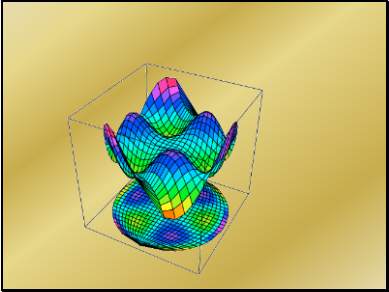
Slide 133



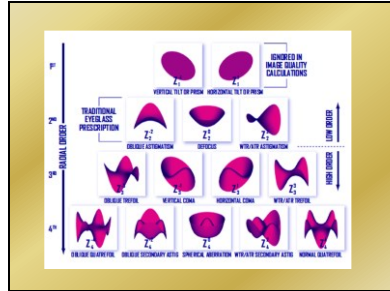
Slide 134



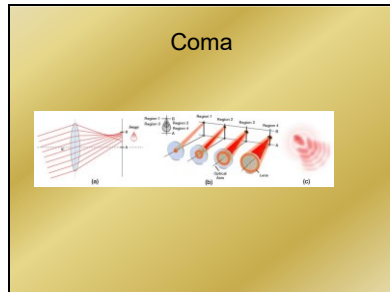
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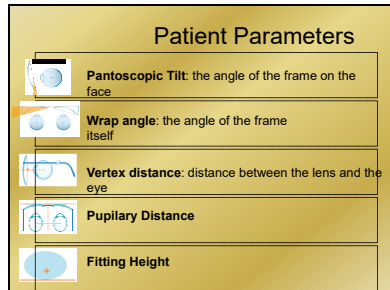
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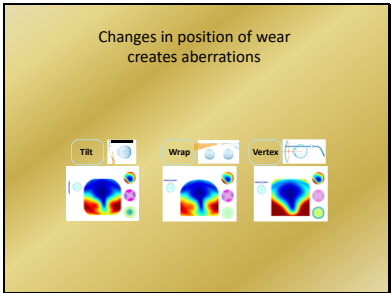
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[illegible]

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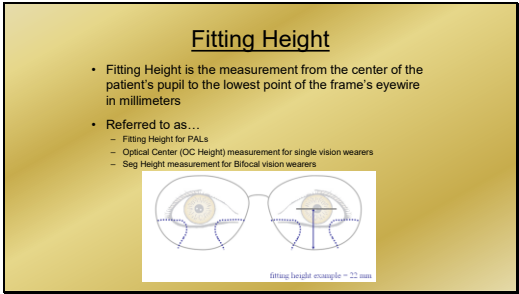
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PD

- Pupillary Distance (PD) refers to the distance between the patients pupils in millimeters



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What about all these **NEW** measurements?

- Actually, measurements like **Vertex**, **Pantoscopic Tilt** and **Wrap Angle** (Position of Wear measurements) are not new
- Lens designers have been using **average** or “**default**” values when creating a new lens for years
- Now the ECP has the **ability** to take these measures for **each** patient individually – **personalizing** the product for that specific person

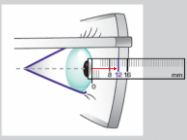
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Vertex

- Vertex is the distance between the back surface of the lens and the apex of the cornea.

VERTEX

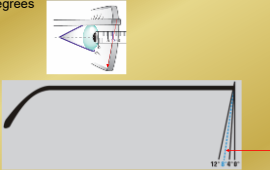
Use a ruler to measure distance from front of eye to back of frame edge—this distance is typically 12 millimeters.



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Pantoscopic Tilt

- Pantoscopic Tilt is the angle of the frame on the face in degrees



The diagram consists of two parts. The top part shows a side profile of a human head with a line representing the eyeglass frame. An arc indicates the angle between the horizontal line of the face and the frame, labeled 'Pantoscopic Tilt'. The bottom part shows a top-down view of a head with a curved line representing the frame's path over the head, with an arc indicating the angle of tilt.

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Wrap Angle

- Wrap angle is the angle of the frame itself measured in degrees



The diagram shows a top-down view of a head with two circular lenses. An arc is drawn between the two lenses, indicating the angle of the frame across the top of the head, labeled 'Wrap Angle'.

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New Measurements

Eye Data

- ERC (Eye Rotation Center)

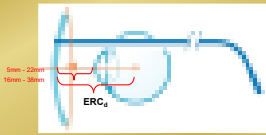
Behavioral Data

- Natural Head Posture (Head Cape)
- Head/Eye Ratio
- Stability Coefficient

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Eye Rotation Center (ERC_e)

- Eye Rotation Center (ERC_e) is the distance between the back of the lens and the point around which the eye rotates
- The ERC can be different for each eye



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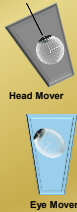
Natural Head Posture

- Natural Head Posture (Head Cape Angle) refers to how a patient's head rests naturally on the neck and shoulders. This has a direct impact on alignment of the design

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H/E Ratio & Stability Coefficient

- Some people move their head more to see things, while other people move their eyes more
- The Head / Eye Ratio is a value that measures this
- The Stability Coefficient determines how consistently the patient sticks to his or her H/E Ratio



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Taking Measurements

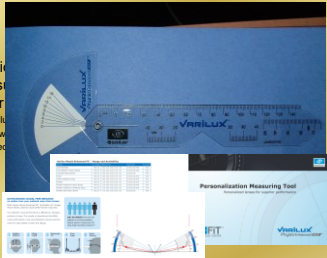
- Standard Required Measurements
 - Frame Measurements
 - Manual
 - Or
 - Electronic Device
 - Fitting Height (Seg Height)
 - PD (Pupillary Distance)
- Position of Wear Measurements
 - Pantoscopic Tilt
 - Manual
 - Or
 - Electronic Device
 - Wrap Angle
 - Vertex Distance
- Behavior Measurements
 - ERC
 - Head Cape or Natural Head Position
 - Electronic Device
 - H/E Ratio
 - Stability Coefficient

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Manual Measurements

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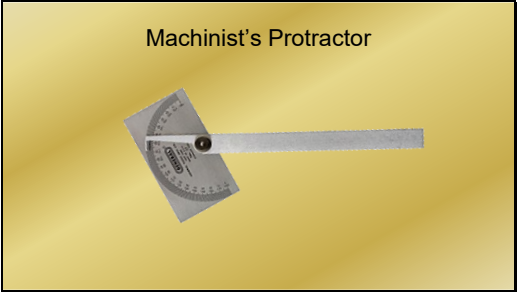
- Position measurements can be taken either:
 - VariLux
 - "How to" video
 - Video



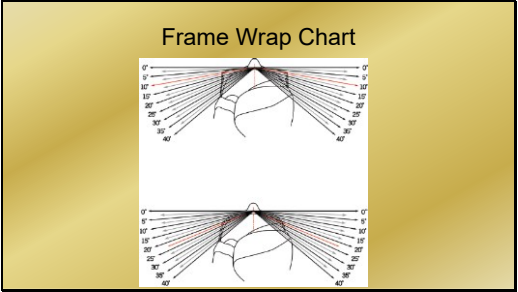
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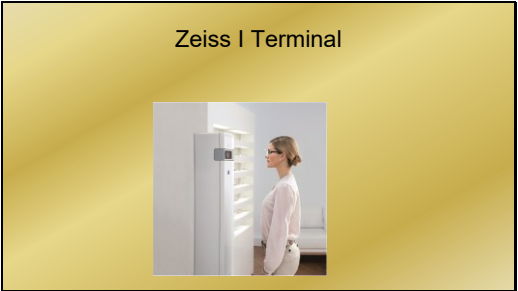
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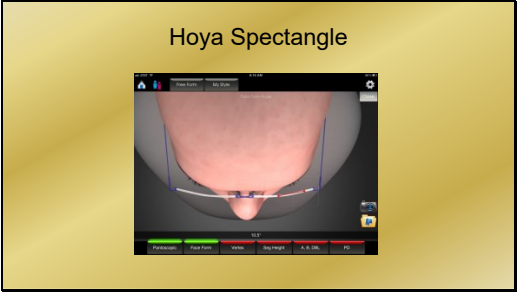
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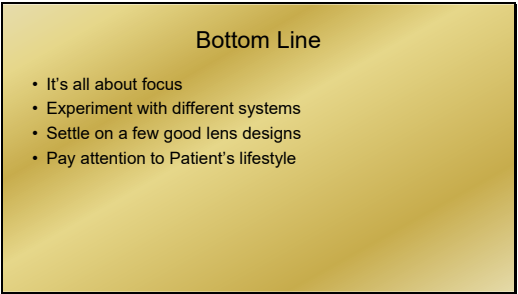
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