Pleasing the Impossible Patient

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Timed Outline 50 Minutes

(1.0 Minute) **Office Training Opportunities**

Bring other staff in to see your solution to problem patients.
Brainstorm afterward to see if anyone has a different slant.
Discuss with the Dr. at office meetings, particularly to understand the "why" something may or may not have worked.

(2.0 Minute) **The Breakdown**

Fitting complaints
Vision Complaints

(1.0 Minute) **Gaining an Understanding**

Listen to the patient's problem.
Look at their current fit.
Ask what is working with the Rx.
Ask what is not working

(1.0 Minute) **On the Nose**

MYTH: Nose contact keeps glasses from sliding
FACT: The sole purpose is to bear the weight of the eyewear
The area of the frame that contacts the nose does not grab or pinch the nose.
ONE CAVEAT: Silicone pads have a greater coefficient of friction to prevent sliding (until they absorb skin oils)

(1.0 Minute) **Plastic Frames**

The ideal plastic frame fits the nose on the top as well as the sides.
Sides-only is acceptable as long as the frontal and splay angles are good. We look for maximum contact.
If good contact is not there during frame selection, reject the frame.

(1.0 Minute) **Nose pad Materials**

Hard Pads
Acetate, Crystal (glass), Titanium
Medium Pads
PVC (vinyl), Ridged Silicone
Soft Pads Silicone
Harder pads may work better since the whole pad is distributing the weight. Softer pads give at the edges a bit, allowing the pressure to be concentrated more in the center of the pad.

(1.0 Minute) **Nose Complaints**

Problem: Soreness on top, bottom, front or back of the resting surface on the nose (one or both sides)
Solution: Increase the amount of surface contact on the nose
Change the frontal or splay angle of pads
Change the position of contact on the nose

Increase the size of the pad to increase area of contact Anatomical Diagram

(1.0 Minute) **Nose Complaints**

Pads must rest flat on the nose

Three angles must be addressed

Frontal angle

Splay angle

Vertical angle

Plastic frames too

(1.0 Minute) **Nose Pad Complaints**

Pad placement on the nose surface affects comfort

Too high causes pressure over nasal bones

Too low squeezes nostrils limiting air flow

The only remedy is widening or narrowing the pads to take advantage of the angles of the nose

This may ***not*** be the best method to raise or lower the frame itself, but maybe if the frame should also move in the direction of the nose pad movement

(1.0 Minute) **Plastic Frame Complaints**

If the top of the nose is sore due to lack of contact on the sides, add pantoscopic tilt to engage the sides of the nose.

Conversely, if the sides of the nose are bearing all the weight, adding retroscopic tilt may help.

NOTE: Adding pantoscopic or retroscopic tilt can change the optical performance. If the back pads of a plastic frame are cutting into the nose. They may be heated and flared to increase the splay angle.

WARNING: heating lenses wit AR Coatings will ruin the lenses. Pop them out before heating the bridge area.

(1.0 Minute) **Temple complaints**

Shank of temples must not exert pressure on the sides of the head in front of the ears

Touch on the side of the head can *cause* slippage

Skull temples (normal temples) are designed to exert pressure in the mastoid area

Library, or Occipital temples (sport or ½ eye) are designed to exert pressure toward the back of the skull

(1.0 Minute) **Temple complaints**

Surface of temple that touches the head must rest flat

To rest flat, we must look behind the ears and follow all the peaks and valleys of the mastoid

Should ***not*** use the back of the ears to keep frame from slipping, but should follow the curve of the back of the ear

(1.0 Minute) **Temple complaints**

Be sure to tilt the temple tips inward toward the neck

This will help to keep temple shank on the top of the ear as gravity pulls them down the nose and against the back of the ear

(1.0 Minute) **Balance Complaints Two**

types of balance Fitting triangle

Level

Balance Complaints

Fitting Triangle

Temple too wide

This side moves closer to face, pushing temple tip away from ear

This side of the nose hurts and opposite ear

(1.0 Minute) **Balance Complaints**

Checking the fitting triangle balance

Using fingernail surface, lift under the forward temple shank and gently allow to rest on nose

Notice if frame pulls to right or left landing on one side of the nose

To tighten overall fit and correct balance, adjust the temple inward on the side that touches the nose first

To loosen overall fit and correct balance, adjust the temple outward on the side that touches the nose last

(1.0 Minute) **Level Complaints**

Leveling the frame

First determine if additional pantoscopic or retroscopic tilt is needed Use this information to determine which side you will adjust to yield level ***AND*** proper pantoscopic tilt (1.0 Minute) **Level Complaints**

To raise the right lens

Add pantoscopic tilt on right side (temple down)

Add retroscopic tilt on left side (temple up)

To Lower right lens

Add retroscopic tilt on right side (temple up)

Add pantoscopic tilt on left side (temple down)

(1.0 Minute) **Level Complaints**

To raise the left lens

Add pantoscopic tilt on left side (temple down)

Add retroscopic tilt on right side (temple up)

To Lower left lens

Add retroscopic tilt on left side (temple up)

Add pantoscopic tilt on right side (temple down)

(1.0 Minute) **How Eyewear Causes Vision Problems**

Patient perspectives

Visual habit – fighting the brain

Some people have a hard time with change

Seeing 20/20 may not be the patient's goal (though they think it is)

They tend to want normalcy and a new Rx can change all that

Patients don't understand there are limits to what eyewear can do

(1.0 Minute) **How Eyewear Causes Vision Problems**

Our Perspective

We strive for perfection
Best acuity is our goal, and we know the patient's brain can and will usually adapt
"you'll have to wear them for 2 weeks"
We tend to keep all things the same and only change the Rx
We understand there are limits to what eyewear can do

(1.0 Minute) **How Eyewear Causes Vision Problems**

Frame adjustment controls lens position
Adjust for lens position first
The purpose of eyewear is good vision
Adjust for comfort second
The patient assumes good vision
The patient concerned with appearance and comfort
Let's do it all!
Solving the problems
Understand the patient's lifestyle goals
Listen carefully to frustrations

(1.0 Minute) **General Vision Complaints**

Critically define the complaint
Blurry vision
Overall, distance, near, elsewhere
Double vision
Overall, distance, near, elsewhere
Perception
Often not describable

(1.0 Minute) **General Vision Complaints**

First double check that eyewear matches Rx
Not just Rx power, but also check for waves and unwanted prism
If good Proceed, if not remake
Compare old eyewear to new
Big change maybe the only problem
Check all other possibilities before referring back to Refractionist

(1.0 Minute) **General Vision Complaints**

Settle the patient
If the patient is not cooperative, we can't resolve the situation.
We need to ensure the patient is looking through the center
Make sure the patient likes the frame
And for that matter, those people with the patient check
for ***expected*** acuity
Use an acuity chart at proper distance for eyewear

(1.0 Minute) **Double Vision**

Vertical double vision
Check for vertical imbalance
With lined bifocals, patient could be looking through lines
Solution – Raise bifocals

Consider slab off when power difference at X90 is 2^{Δ} or more

(1.0 Minute) **Double Vision**

Horizontal double vision

Check for horizontal prism (PD off)

Solution – Remake correctly

When there is a significant power difference at X 180 and patient looks to the side

Solution: consider contact lenses

(1.0 Minute) **General Vision Complaints**

When the patient can see clearly, but things are "just weird"

Usually means that new lenses are changing Perception, or "visual habits"

The go-to answer has always been base curve

Could be, but often not the problem

(1.0 Minute) **Base Curves**

Change in base curve occurs for a reason

If base curve is appropriate due to power change, vision can be clear, but still "weird"

This is when it is appropriate to require the patient to wear for a few days to allow the brain to adapt

If base curve change is just because the appropriate one was not on hand, remake in the proper base curve

Check factory base curve charts to be sure correct base curve for their design was used

(1.0 Minute) **Base Curves**

Aspheric and Freeform are exceptions

These lenses reduce many of the natural distortions and aberrations inherent in regular lenses

Optimum clarity of vision can actually be disconcerting!

Essential to check position of wear for the design

(1.0 Minute) **Position of Wear**

Applies to all types of lenses

Vertex

Pantoscopic angle

Face form

(0.5 Minute) **Lens Position** (Illustration)

The visual axis passes straight through the eye to the macula

(0.5 Minute) **Lens position** (Illustration)

Correct pantoscopic tilt aligns the lens surface perpendicular to the visual axis

(1.0 Minute) **Lens Position**

To avoid oblique astigmatism the correct amount of pantoscopic tilt is required.

Generally, there should be equal space from the brow and the cheeks to the lens. Since the visual gaze at rest is slightly downward, pantoscopic tilt allows the lens to be perpendicular to the visual axis in the normal gaze, reducing oblique astigmatism and prism.

(1.0 Minute) **Demonstration (**video Illustration)

(1.0 Minute) **Pantoscopic Angle**

Matching old angle ***may*** help, but also may not give best vision.

Correct Pantoscopic angle is approximately 2° for every millimeter optical center is below pupil center at straight forward gaze.

Incorrect angle causes prism and unwanted oblique astigmatism

(1.0 Minute) **Wrap – or Face Form**

Face form tilts the lens too, causing the same problems of oblique astigmatism and prism it's just in a different plane.

(0.5 Minute) **Face Form** (Illustration)

(0.5 Minute) **Face Form** (Illustration)

The correct face form makes the lens surface perpendicular to the visual axis

(1.0 Minute) **Face Form**

Should be adjusted for patient first

Ideally the lens surface should be perpendicular at the PD, or, 2degrees of face form for every millimeter of decentration

Changes from the normal will need compensation

(1.0 Minute) **Face Form**

Changes the effective power of the lens

Too much or too little effectively creates cylinder

Too much or too little effectively creates prism

(1.0 Minute) **Face Form**

Matching old angle ***may*** help, but also may not give best vision

A normal amount is required for optimal optics

Correct face form places the surface of the lenses perpendicular to the visual axis at straight forward distant gaze (PD)

2 degrees of face form for each millimeter of Decentration.

(1.0 Minute) **Measuring Face Form**

Manual Methods

Use a protractor to measure the relationship between a line across the backs of each endpiece and the plane of the lenses

Use a wrap angle measuring chart

Use a panorameter

(1.0 Minute) **Vertex Distance**

This can change the ***effective*** power of the correct power lens

Doesn't have to match the old glasses, but does need to be at the distance the prescriber Intended, or compensated for the new distance

Changes the patient's perception – think "feel"- of the surrounding world Can affect the size the patient perceives

(1.0 Minute) **Vertex Distance** (Illustrations)

Distance from the cornea to the spectacle lens

Changes the effective power of the lens

This occurs because the point of focus moves as the lens moves. At the proper Vertex distance, light rays are in focus At the proper Vertex distance, light rays are in focus

As Vertex distance is increased,

the focus follows the lens away

from the retina

(1.0 Minute) **Vertex Distance**

As a lens is moved away from the eye
Plus, lenses require more minus in the lens
Minus, lenses require more minus in the lens
As a lens is moved closer to the eye
Plus, lenses require more plus in the lens
Minus, lenses require more plus in the lens
The Focus on the retina moves with the lens, so add plus to shorten the focus, add minus to stretch the focus.
Compensated Power = Original Power / (1 + Distance Moved * Original Power)

(1.0 Minute) **Slanting Surfaces** (Illustration)

Slanting Surfaces (Horizontal Prism)
Solution – Split prism between eyes

(1.0 Minute) **Slanting Surfaces** (Yoked Base Down Prism)

Prism can cause Patient to feel short; Floor seems like walking in a bowl; or floor slants up looking away (Base Down Prism)
Solution – Adjust optical centers down (minus lenses) or up (plus lenses)

(1.0 Minute) **Slanting Surfaces** (Yoked Base Up Prism)

Prism can cause Patient to feel tall; Floor seems like walking on a hill; or floor slants down looking away (Base Up)
Solution – Adjust Optical centers up (minus lenses) or down (plus lenses)

(1.0 Minute) **Slanting Surfaces**

Vertical prism all on one eye can cause slanting (high side on the base side of the prism)
Solution – Split prism between eyes

(1.0 Minute) **Multifocal position**

Consider visual habits
More often too low than high
Consider visual tasks
Where does the patient do their tasks?
What about the effect of the distance Rx?

(1.0 Minute) **Multifocal position**

Traditional proper position
Progressives – Pupil center
Trifocals – lower edge of pupil
Bifocals – Lower edge of limbus

Progressive Addition Heights (illustration)
Trifocal heights (illustration)
Bifocal Heights (illustration)