PRESBYOPIA POTPOURRI: PEARLS AND PREDICTORS FOR POSITIVE OUTCOMES

Jason Jedlicka, OD, FAAO, FSLS

Disclosure Statement:

Consultant for Bausch and Lomb, Eaglet Eye, and Oculus

Please Silence All Mobile Devices

1

The Challenge of Presbyopia

2

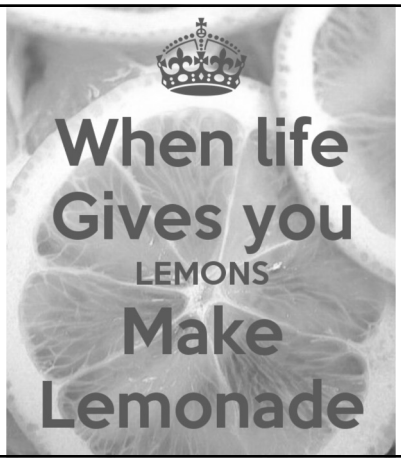
The Challenge of Presbyopia

- It is a permanent affliction
- It hits you with half of your life still to live
- It is depressing
- It reveals your mortality – makes you feel old

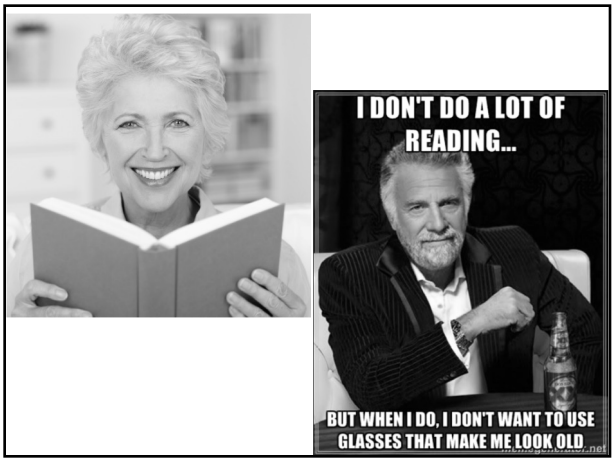
3

Dealing with Presbyopia

4

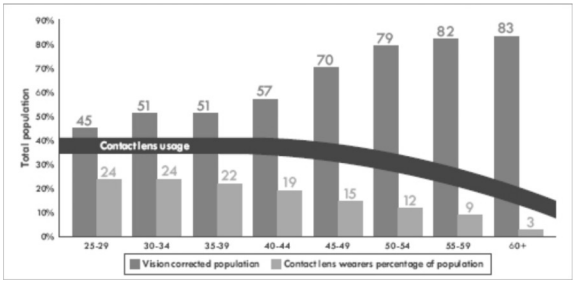


5



6

The Presbyopia Potential



7

Number One Reasons for Contact Lens Dropout

Number one reason for dropout	U.S.	Americas (includes U.S.)	Asia/Pacific	Europe/Middle East/Africa
Comfort/fit	50.0%	52.9%	41.9%	45.6%
Vision not as good as with glasses ☆	15.9%	14.2%	3.8%	17.5%
Expense	12.3%	11.6%	11.9%	17.5%
Difficult to put in and take out	7.2%	8.4%	7.5%	7.0%
Bifocal/trifocal lenses don't work as well as eyeglasses ☆	5.1%	4.5%	0.6%	0.0%
Inconvenient to wear	5.1%	4.5%	10.0%	0.0%
Lens care/cleaning too time consuming	2.2%	1.9%	0.6%	0.0%
Fear of or history of eye infections	0.7%	0.6%	17.5%	3.5%
Lens care/cleaning too difficult	0.7%	0.6%	0.6%	0.0%
No selection	0.7%	0.6%	1.3%	1.8%
Need to clean frequently	0.0%	0.0%	3.1%	1.8%
Doesn't correct for astigmatism	0.0%	0.0%	0.6%	1.8%
Easy to lose	0.0%	0.0%	0.6%	1.8%
Need for regular eye exams	0.0%	0.0%	0.0%	1.8%

8

Presbyopia and Contact Lenses

- What impacts our approach and odds of success?
  - Visual Demands
  - Previous or current lens wear experience
  - Pupil Size
  - Lid Positions relative to the eye
  - Acceptance of monovision / uneven correction
  - Visual Capabilities
    - Reduced VA in one eye or the other
    - Binocularity
  - Prior Surgery (RK, LVC, etc…)
  - Refractive Status
    - Myopia, Hyperopia, Astigmatism

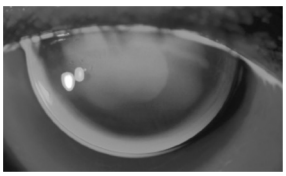
9

Visual Demands

- Crucial to find out what the individual wants the lenses for!
  - Full time use or part time?
    - Impact the ability to use GPs, among other things
  - If for use at work, what are the visual demands of the job?
  - If for avocations, what kind of activities are involved?
  - Sometimes its easy to slip a little near correction in even when someone wants distance only ☺

10

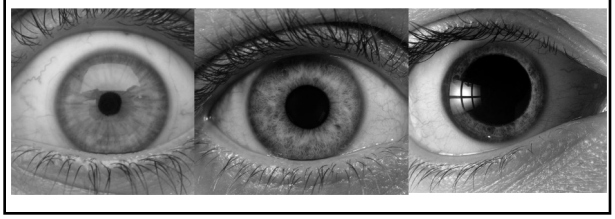
Lens Wear Experience



11

Pupil Size

- Standard multifocal lenses are basically designed for an AVERAGE pupil size
- Larger or smaller pupils may not work well in all multifocal lenses

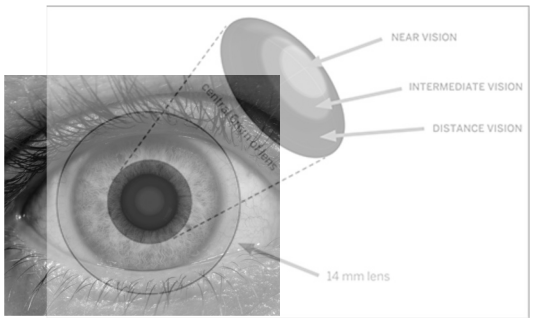


12

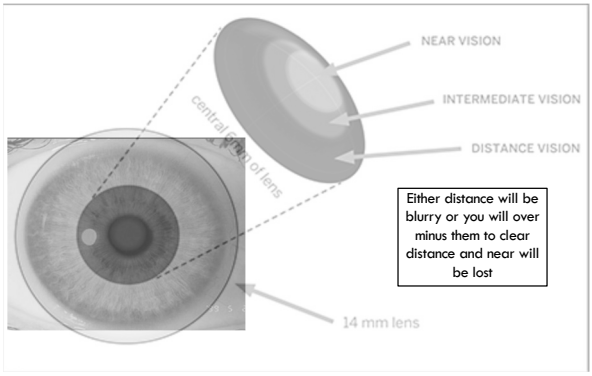
Pupil Size

- Small pupils will only take in what comes through the center of the lens
  - For center near designs that may mean blur at distance and over minusing to compensate
  - For center distance designs that may mean less near VA
- Large pupils will not get enough of the center of the lens correction and may not see well at near with a center near design
  - Also, many lens designs have increasing minus in the lens periphery, so larger pupils may end up over minused without careful over refracting or will accept more plus
- Some newer designs attempt to adjust the add zones for the typical pupil size in an RX
- With monovision, this is irrelevant

13



14



15

Lid Position

- More relevant with corneal GPs than soft, hybrid, or scleral

Lid attached or translating design that rests on the lower lid?

16

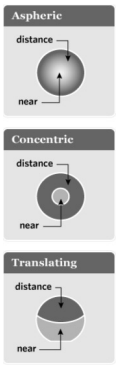
Visual Capabilities

- If monocular, reduced VA in one eye, or strabismic, the options are limited
- Monovision not a good option
- Can't rely on the weaker eye to contribute

17

Binocular Function

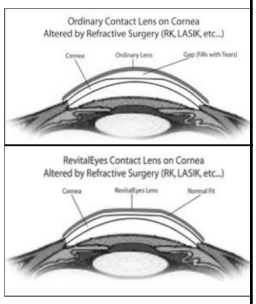
- Aspherics tend to work better binocularly than individually
  - May not work great for monocular patients
  - May be better than nothing
- Ideally a concentric or translating design would provide the best vision if the patient will tolerate
  - For monocular or essentially monocular patients, this route gives best vision



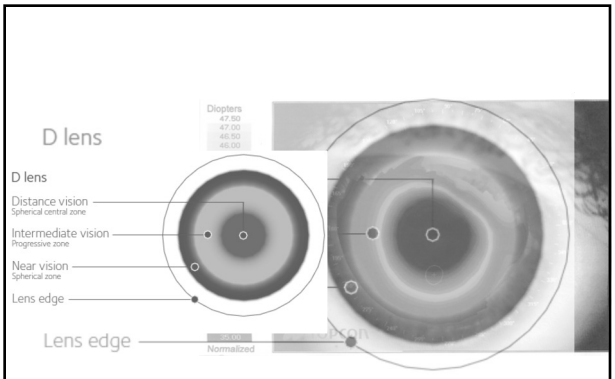
18

Prior Refractive Surgery

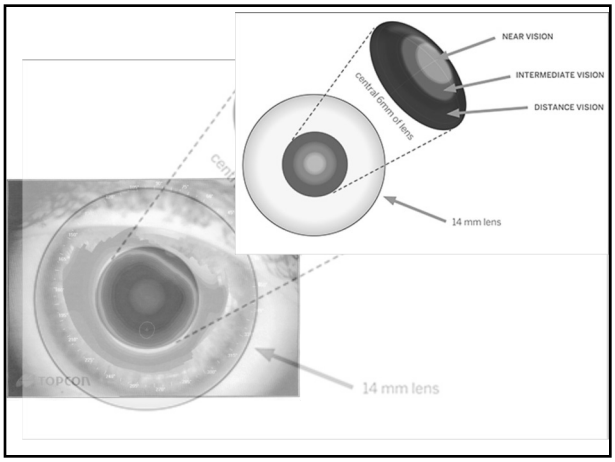
- Creates a difficult corneal shape to work with
- Forget translating designs
  - Movement is too unpredictable
- Scleral lenses work WELL
- MAYBE if you are lucky a soft disposable will work
  - Don't forget the optics of a post surgical eye
  - Don't forget lens flexing which generates more plus meaning patients will eat up minus



19



20



21

Refractive Status

- Moderate to High Myopia (above -4.00)
- Low Myopia (below -4.00)
- Low Hyperopia (below +1.50)
- Moderate to High Hyperopia (above +1.50)
- Astigmatism
  - Low = Below 1 diopter
  - Moderate = 1.00 to 2.50 diopters
  - High = Above 2.50 diopters

22

Moderate to High Myopia

- Fully dependent on corrective lenses
  - Really cannot functionally remove glasses to do near work of any volume
- Often are contact lens wearers by history
- Should be among the easier groups to convert to Presbyopic contact lens wearers

23

Low Myopia

- Typically CAN remove glasses and be functional at near
- Many were contact lens wearers but are more apt to simply drop out when they realize they can see better with their glasses
- More challenging to keep in full time wear
- May opt for part time wear
  - Can often try dropping a lens for monovision

24

Low Hyperopes

- Often see distance well, will start with NVO in many cases
- SHOULD be easy to convert to CL since many have NO glasses wear experience and are not adapted to glasses limitations
- When distance VA starts to drop, you have a golden opportunity to put them in multifocal lenses
  - You can help the near a lot without making the distance worse – just don't be too aggressive
- Monovision can work with these individuals, but don't be surprised if they only want to wear a lens in the near eye even if there is refractive error in the distance eye

25

Moderate to High Hyperopes

- Should be similar to working with moderate to high myopes
  - May have more BV issues that muck up the waters
  - Will be fully dependent on correction at all distances

26

Decision Tree for Presbyopia

- Step 1:
  - Do they have functional nearly normal and nearly equal vision in both eyes (20/40 or better in each eye)?
    - If YES, all options are still on the table
    - If NO, Eliminate monovision

27

Decision Tree for Presbyopia

- Step 2:
  - Do they accept Plus over one eye at distance?
    - If Yes, all options are still available
    - If No, eliminate monovision (and avoid too much modified monovision)

28

Acceptance of Monovision / Uneven Correction

- My methods:
  - Standard eye dominance test is not good enough!
  - Plus acceptance test
    - Full distance correction OU
    - Hold +1.00 or +1.25 over one eye then the other
    - Ask patient which is more comfortable or tolerable, when the lens is over the right eye or the left
    - Then hold the lens over the eye that was less bothersome to the patient and show them distance and near targets and see what their reaction is
    - Let them know that by giving up 5% of their distance vision, they gain 80% of their near vision

29

Plus Acceptance Test

- By determining the individual's plus acceptance you will find out if they are:
  - A good candidate for monovision
  - How much modified monovision you can push in multifocals
  - Whether a distance / near multifocal system will be successful (ie Biofinity MF)

30

Decision Tree for Presbyopia

- Step 3:
  - Are they currently wearing contact lenses that generally work well for them?
    - If yes, try to stay in a similar mode
    - If no, consider other modes of lens
      - Example, if they wear GPs but are struggling with comfort, consider hybrids or softs
      - Example, if they are using soft lenses but struggling with vision, consider GPs or hybrids

31

Decision Tree for Presbyopia

- Step 4:
  - Do they have astigmatism that requires correction?
    - If no, all options are available
    - If yes, consider soft toric monovision if they accept Plus blurring, if not consider GP or hybrid
    - Personally I have not been a fan of soft toric multifocals
      - Have had good experiences so far with Ultra Multifocal for Astigmatism

32

Decision Tree for Presbyopia

- These are the major 4 questions to get you into a narrowed down place
  - From here, you ought to have a good feel for what lens you will want to use

33

Over refracting…

- Every fitting guide and protocol says NOT to use the phoropter….
- You cannot efficiently assess binocular plus acceptance with loose lenses
- Use the phoropter to binocularly balance and fog to max plus endpoint, THEN use LOOSE LENSES to verify and adjust from there
- With Monovision – Over refract the near eye to distance so I have an idea of the working add power of the near eye before I try to adjust it

34

Over Refracting

- With Monovision – Over refract the near eye to distance so I have an idea of the working add power of the near eye before I try to adjust it
  - For example, if the patient is 55 and complaining of near issues…
    - You over refract the near eye to distance and get -2.75
    - You over refract the near eye to distance and get -1.25
    - Two different strategies to manage them, but without knowing the distance OR you cant correctly approach this

35

Gauging Improvement in Acuity

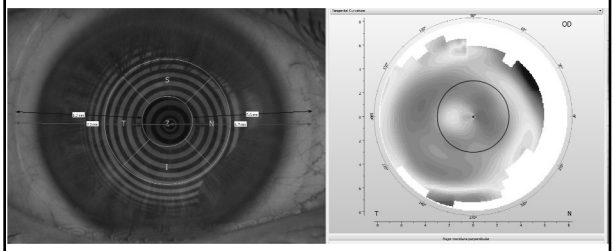
- While trying to improve VA at distance or near I try to avoid actually having patient read the chart
  - The patient may read 20/20 but have doubling and hate the quality of vision
  - Instead ask them to look at a full chart of various sized letter and give you a subjective assessment of the clarity of the letters on the chart (1-10), then repeat at near
  - Then make the changes you want to try to the RX in one eye or the other and ask them again to subjectively report the clarity of distance and near VA
  - By making them commit to a subjective score you can compare one RX to another

36

Soft Multifocal Pearls

- Centration plays a role in function
- Due to layered optics, uneven correction is common to utilize if tolerated
- Follow fitting guide to start with
- Do NOT overminus – do not assume the labelled power is matching the patients RX - fog and unfog monocularly OD and OS then blur up with plus then come down binocularly
- Do not be afraid to leave a little undercorrected cylinder
- Try to correct to the meridian of LEAST minus/MOST plus

37



38

Soft Monovision Pearls

- Give FULL MONOCULAR correction to the distance eye (do not overplus or underminus)
- Do not give too much near to the near eye (you lose intermediates)
- Consider a multifocal in the near eye for expanded range at near and less distance disturbance
- Remember you need 20/20 at distance but only really need 20/25-20/30 at near

39

Soft Toric Pearls

- Err on side of undercorrecting cylinder
- Watch rotation, soft toric monovision cannot function with unstable lenses (one eye is blurry already)
- Presbyopes tend to have more issues with toric lens rotation with prism ballasted lenses, consider dual slab off
  - When rotation occurs, don't just switch to another lens of the same design
- When one eye has cyl and the other does not, consider a soft toric single vision lens in one eye and a multifocal in the spherical eye

40

Hybrid lenses

- Great for astigmatic correction
- Can use for monovision
- Multifocals available as well, but not as many customized parameters
- Centration is a must again
- Fit is tricky at times
- If you can get the fit right, they can work great
- Nice for part time wear

41

GPs for Monovision

- Again, just like all lens types, GPs can be used for monovision
- Work well when astigmatism is present or with traditional GP wearers
- Easy to convert distance only lens wearers when they reach that age

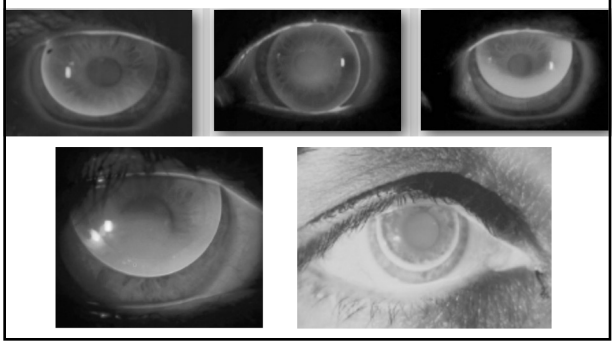
42

GP Aspheric Multifocals

- Work well in most cases
- Vital to get the fit right!!
- Ideal fit should be a fairly centered, lid controlled fit
- If the lids are such that lid control is impossible, you cannot fit these successfully
- If the lens is TOO lid controlled, again, you cannot fit these successfully*
  - Will tend to take too much minus and never achieve good near vision if over minused

43

Adjust fit of Aspheric GPs by steepening or flattening BC and changing diameter until ideal fit is achieved

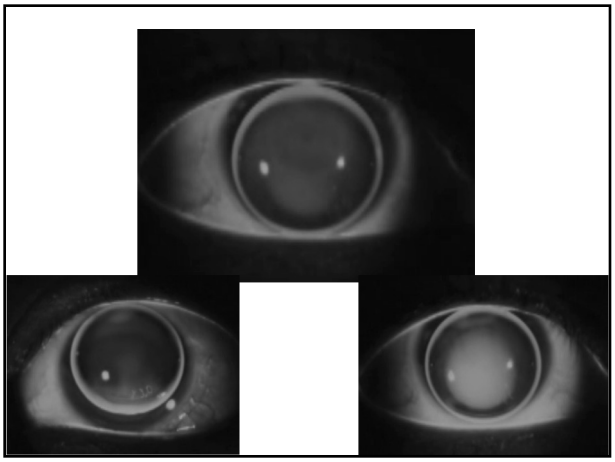


44

GP Translating Multifocals

- Provide the best distance and near vision due to alternating optics
- Need to ride on the lower lid or close to it
- Traditionally these have been somewhat uncomfortable, but they are getting better with newer designs
- Get fit right, then fine tune RX and segment height

45



46

Other Pearls

Number One Reasons for Contact Lens Dropout

Number one reason for dropout	U.S.	Americas (includes U.S.)	Asia/Pacific	Europe/Middle East/Africa
Comfort/fit ☆	50.0%	52.9%	41.9%	45.6%
Vision not as good as with glasses	15.9%	14.2%	3.8%	17.5%
Expense	12.3%	11.6%	11.9%	17.5%
Difficult to put in and take out	7.2%	8.4%	7.5%	7.0%
Bifocal/trifocal lenses don't work as well as eyeglasses	5.1%	4.5%	0.6%	0.0%
Inconvenient to wear	5.1%	4.5%	10.0%	0.0%
Lens care/cleaning too time consuming	2.2%	1.9%	0.6%	0.0%
Fear of or history of eye infections	0.7%	0.6%	17.5%	3.5%
Lens care/cleaning too difficult	0.7%	0.6%	0.6%	0.0%
No selection	0.7%	0.6%	1.3%	1.8%
Need to clean frequently	0.0%	0.0%	3.1%	1.8%
Doesn't correct for astigmatism	0.0%	0.0%	0.6%	1.8%
Easy to lose	0.0%	0.0%	0.6%	1.8%
Need for regular eye exams	0.0%	0.0%	0.0%	1.8%

47

Other Pearls - the Comfort Paradigm

Symptoms

NONE MILD MODERATE SEVERE

Optimize fit
Avoid MPS (H_2O_2 or dailies)
Manage dry eye
Good habits especially with screen use

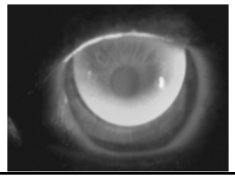
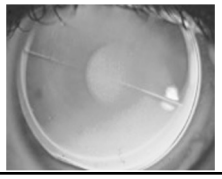
Visual Impact

Beyond that….

48

Other Pearls

- For GP and hybrids – they have to fit right before you spend time finalizing the RX
- Do NOT spend time assessing the over refraction if the fit is not the way it is SUPPOSED to be – fix the fit first then fine tune the powers

49

Other Pearls

- For part time wearers and those that mainly want CL for distance activities, use a low add in one or both eyes to provide a slight amount of near correction

50

Fees / Pricing

- Set your prices so that you can afford to do this
  - If your fee is $ and the patient does not want to pay that, then don't do it!
  - If your fee is $ and the patient is still interested, then you know you can invest the time with them
- Offer full refunds on lenses, charge for your services
- Perhaps offer a free trial – first visit no charge to try lenses

51

Final Comments

- This is such a huge potential opportunity for many practices that they forgo
- Presbyopic contact lens wearers are a GREAT referral source and a GREAT way to start to build a specialty contact lens practice
  - Every practice has presbyopes already
  - Not every practice has a lot of KC or irregular corneas

52

- Questions?

53