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Growing Your Optometric Practice With the New Spectrum of Presbyopia Treatments

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Growing Your Optometric Practice With the New Spectrum of Presbyopia Treatments

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Activity Description

This supplement reviews the impact of presbyopia on patients and practitioners. It focuses on the latest in presbyopia treatments, including topical treatments, surgical options, and strategies for effective patient communication.

Target Audience

This certified CE activity is designed for optometrists.

Learning Objectives

Upon completion of this activity, the participant should be able to:

- **Define** the prevalence, etiology, and key characteristics of progression of presbyopia from early to late-stage patients
- **Outline strategies** for finding, communicating with, and educating patients about presbyopia correction clinical outcomes, costs, risks, and benefits, including quality of life and quality of vision considerations
- **Describe** how the latest presbyopia-correcting IOL technologies, multifocal contact lenses and pharmaceutical presbyopia treatments can address outcomes in a new group of presbyopia patients, including those with comorbid conditions

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PRETEST QUESTIONS

Please complete prior to accessing the material and submit with Posttest/Activity Evaluation/Satisfaction Measures for credit.

1. Please rate your confidence in your knowledge and ability to outline strategies for communicating with patients about presbyopia correction clinical outcomes, including quality of life and quality of vision considerations (based on a scale of 1 to 5, with 1 being not at all confident and 5 being extremely confident).

a. 1
b. 2
c. 3
d. 4
e. 5

2. Approximately how many people worldwide have presbyopia?

a. 50 million
b. 180 million
c. 500 million
d. 1.8 billion

3. What percentage of current referred/comanaged cataract patients receive presbyopia-correcting intraocular lenses (IOLs)?

a. 10%
b. 25%
c. 42%
d. 63%

4. What is the mechanism by which pilocarpine drops correct presbyopia?

a. Stimulates miosis and ciliary body contraction
b. Softens the lens
c. Stimulates ciliary body contraction only
d. Stimulates mydriasis

5. How many topical drops have been approved by the FDA for the treatment of presbyopia?

a. None, but several have promising phase 3 results
b. One, but there are several more currently in phase 3 trials
c. Two, high-dose (1.25%) and low-dose (0.4%) pilocarpine
d. Seven, each with different mechanisms of action and modes of delivery

6. A 60-year-old woman with moderate macular degeneration and 2+ NSC presents for a cataract evaluation. Her VA is 20/50 OD and 20/60 OS. With the brightness acuity test, her VA is 20/100 OD/OS. What IOL would you recommend for the patient?

a. Enhanced monofocal IOL
b. Wavefront-shaping extended depth of focus (EDOF) IOL
c. Hybrid multifocal/EDOF IOL
d. Small aperture IOL
e. Light adjustable IOL

7. Which presbyopia-correcting IOL uses a negative spherical aberration correction and a violet filter that enhances contrast and offers a broad defocus range with excellent near vision while providing higher contrast under lower light conditions?

a. Enhanced monofocal IOL
b. Wavefront-shaping EDOF IOL
c. Hybrid multifocal/EDOF IOL
d. Small aperture IOL
e. Light adjustable IOL

8. A 70-year-old man presents for a cataract consultation. He has 3+ NSC and the rest of the exam is unremarkable. He wants spectacle independence but is concerned about refractive surprises. Which presbyopia-correcting IOL allows for postoperative adjustments to be made and may ease his concern?

a. Enhanced monofocal IOL
b. Wavefront-shaping EDOF IOL
c. Hybrid multifocal/EDOF IOL
d. Small aperture IOL
e. Light adjustable IOL

9. Small aperture IOL should not be used in patients with _____.

a. Astigmatism
b. Corneal dystrophies
c. Dry eye
d. Macular diseases

10. What percentage of optometrists say they are unsure or unlikely to discuss presbyopia-correcting IOLs with their cataract patients?

a. 12%
b. 32%
c. 52%
d. 72%

11. Under which conditions is it reasonable to guarantee a patient that presbyopia-correcting IOL treatment will result in spectacle independence?

a. If a retina specialist agrees on the treatment plan
b. When the patient is unwilling to undergo treatment without any guarantee of success
c. When the presbyopia is mild and it's obvious that a presbyopia-correcting IOL will correct their presbyopia
d. Never, under no circumstances should you make guarantees about clinical outcomes

GROWING YOUR OPTOMETRIC PRACTICE WITH THE NEW SPECTRUM OF PRESBYOPIA TREATMENTS

This supplement reviews the impact of presbyopia on patients and practitioners. It focuses on the latest in presbyopia treatments, including topical treatments, surgical options, and strategies for effective patient communication.

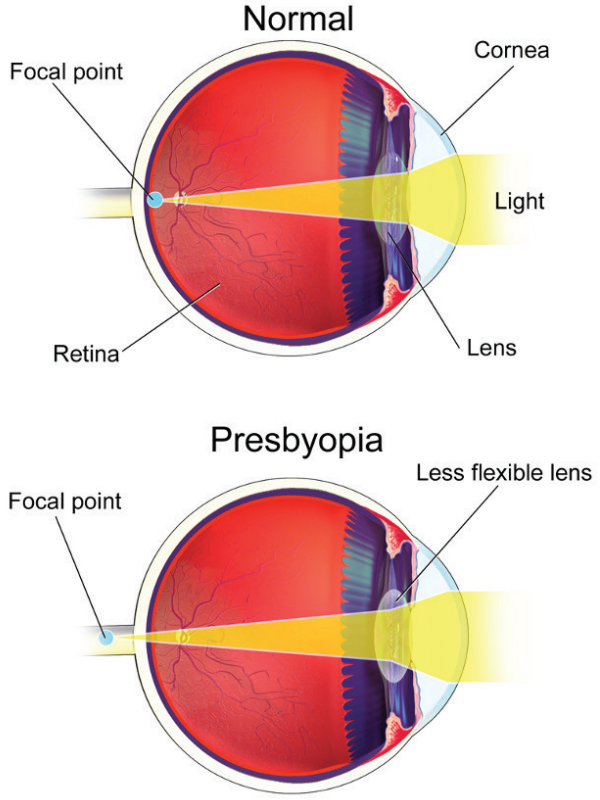
Introduction to Presbyopia

Presbyopia 101

BY MARC R. BLOOMENSTEIN, OD, FAAO

Presbyopia is an age-related vision disorder characterized by anterior lens displacement, bilateral esotropic movement (eyes turn in), and miosis of the pupils that leads to difficulties focusing on near objects,[1] as illustrated in Figure 1. Globally, it's estimated that there are 1.8 billion[2] people with presbyopia, making it the most common age-related disorder. Moreover, this number continues to grow as the global population ages. Left untreated, presbyopia can significantly impact patients' quality of life. It's estimated that 826 million people have near vision impairment due to uncorrected or undercorrected presbyopia,[2] resulting in an annual global productivity loss of $25 billion.[3] Thirty-seven percent of presbyopes rate the loss near vision as having the most significant impact on quality of life, making it their most impactful age-related ailment.

For these reasons, a cure for presbyopia has been considered the holy grail of ophthalmic eye care. As it stands, however, there is no cure but there are a few different options for the treatment of presbyopia. One option is progressive or bifocal spectacles, which are largely effective but are associated with peripheral blur, a restricted visual field, and impaired depth perception. They can also fog, be inconvenient, alter a patient's appearance in unwanted ways, and are not a permanent solution. Contact lenses are another option but can lead to the development of age-related dry eye symptoms and can be difficult to use as manual dexterity reduces with age.



The lens ages and stiffens, bringing the focal point behind the retina and causing blurry vision

Figure 1. Mechanism of presbyopia.[4] The lens ages and stiffens, bringing the focal point behind the retina and causing blurry vision.

Image Source: https://en.wikipedia.org/wiki/Presbyopia. Image created by Bruce Blaus and used in its original form.

"Left untreated, presbyopia can significantly impact patients' quality of life."

–Marc R. Bloomenstein, OD, FAAO

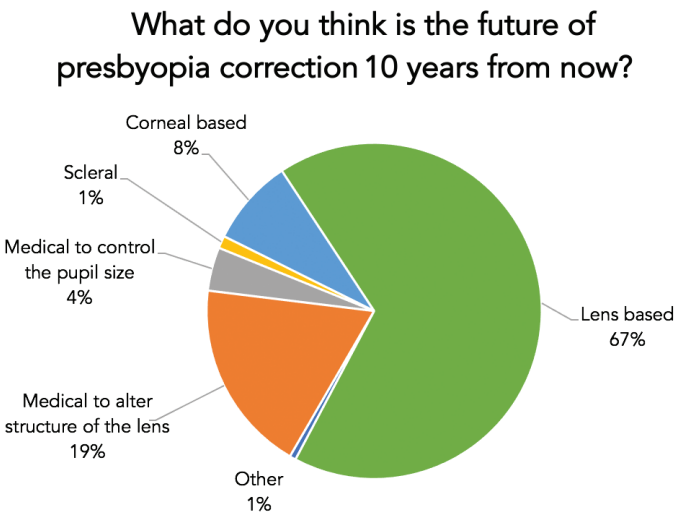


Figure 2. Most respondents to a *Modern Optometry* survey believe lens-based treatment to be the future of presbyopia correction.

This supplement will focus on two additional treatment options.

The first is topical presbyopia-correcting eye drops. This is an emerging category of presbyopia treatments that can temporarily treat presbyopia by applying a pharmaceutical either directly to the eye or eyelid. This is a rapidly growing area of treatment, and this supplement will provide a crash course in this technology: what the options are that are available and soon to be available, what the pitfalls of this treatment option might be, and how best to incorporate them into your practice.

The other focus of this supplement is presbyopia-correcting intraocular lens (IOL) implants. Presbyopia-correcting IOLs are used in both refractive lens exchange and cataract surgery to replace the lens of the eye, and they come in a variety of categories. According to a 2019 *Modern Optometry* Survey, just 10% of current referred/comanaged cataract patients receive presbyopia-correcting IOLs despite also finding that 67% of respondents believe lens-based treatments will be the future of presbyopia correction 10 years from now, as shown in Figure 2. This supplement provides an overview of these presbyopia-correcting IOL technologies and case examples to illustrate how to identify the appropriate option for each patient.

"A cure for presbyopia has been considered the holy grail of ophthalmic eye care."

–Marc R. Bloomenstein, OD, FAAO

With any of these options, communicating with your patients about their goals and expectations for treatment is key. That theme will be woven throughout this supplement but will be tackled head-on in the final portion that will discuss approaches for guiding your patients through their presbyopia journey and addressing specific, common concerns.

1. Bourne RR, et al. Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis. *The Lancet Global Health*. 2017;5:e888-e897.
2. Fricke TR, et al. Global prevalence of presbyopia and vision impairment from uncorrected presbyopia: systematic review, meta-analysis, and modelling. *Ophthalmology*. 2018;125:1492-1499.
3. Frick KD, Joy SM, Wilson DA, Naidoo KS, Holden BA. The global burden of potential productivity loss from uncorrected presbyopia. *Ophthalmology*. 2015;122:1706-1710.
4. https://en.wikipedia.org/wiki/Presbyopia.

Innovations in Presbyopia: The Emergence of Topical Treatments

Presbyopia Eye Drops

BY JOSH K. JOHNSTON OD, FAAO

Topical treatments are the next revolution in presbyopia. Currently, there is just one FDA-approved option, but that number is soon to grow with the other options in the pipeline. As we stand at the precipice of a new way of treating presbyopia, it's appropriate to review the upcoming topical options, the role they will fill going forward, and how best to optimize outcomes when using them.

PILOCARPINE DROPS AND OTHER TOPICAL PRESBYOPIA TREATMENTS

Currently, there is one FDA-approved topical treatment for presbyopia, the 1.25% pilocarpine drop (Vuity, AbbVie). It's been featured in commercials and is generating buzz among patients who come into the office specifically requesting it. This topical is dropped directly into the eyes and works by stimulating both miosis and ciliary body contraction, thus stimulating accommodation.[1]

While this is the only FDA-approved option, there are a host of others that are vying for FDA approval as shown in Figure 1. These differ from the available drops in their concentration, mode of delivery, or mechanism of action.

Among these, three are currently in phase 3 trials. One of these is a low-dose (0.4%) pilocarpine manufactured by Orasis that is intended for use twice daily.[2,3] Patients are already using the 1.25% off-label more than once a day and so this lower dose is essential a milder version of that. Eyenovia is also in phase 3 trials for a pilocarpine system that uses a novel spray delivery system that allows for micro-dosing at multiple concentrations, enabling it to be used PRN.[4] Visus has begun enrollment for a phase 3 trial for their brimonidine carbachol drop that could extend the window

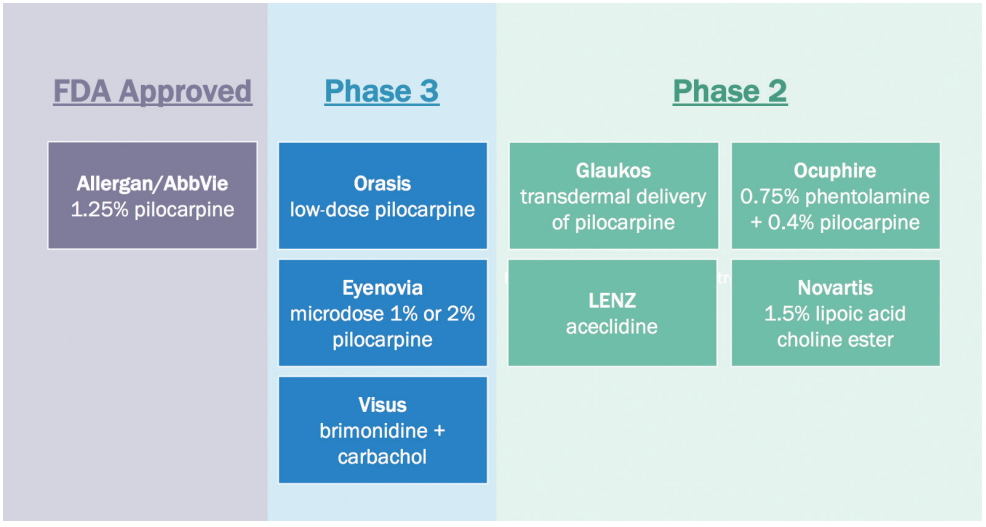


Figure 1. Topical presbyopia treatment approaches.

"Drops, along with glasses and contacts, should be viewed as one tool in the toolbox and one which can give a patient the ability to function without glasses even for a short period of time."

—Josh K. Johnston OD, FAAO

of efficacy up to four and even six hours.[5]

There is another handful of topical treatments in phase 2 trials. Some differ in delivery methods, such as topical pilocarpine developed by Glaukos that is applied to the eyelids to penetrate through to the eye rather than dropping directly into the eye.[6] Others operate through completely novel mechanisms. Ocuphire, for example, has developed a dilation inhibitor that data suggests could have a longer duration of effect.[7] We could potentially tell our patients to use this when they go to bed at night, and they can wake up and see. And lastly, the Novartis drop is a lipoic acid and softens the lens to get back some of the natural accommodation.[8]

Where this may be headed is the kind of situation where we can take a "boutique" approach to things where options will be tailored to patient needs. The factors at play in making these decisions will be the durations and onset that the patient requires, the kinds of activities they want to do, and so forth.

IDEAL PATIENTS

These pilocarpine drops are on-label for any of the 128 million adults with presbyopia, so it is seemingly an option for any-and-all presbyopes: early, middle, or late stage. In terms of who is the ideal patient for topical presbyopia treatments, we should be factoring in age, baseline refraction (hyperope, emmetrope, or myope), and near vision needs (Figure 2).

In my practice, the sweet spot for treatment with topical drops are patients who are suffering from near vision issues and are in their early 40s through late 50s. Emmetropic presbyopes are also ideal for this treatment. That said, the treatment population extends beyond presbyopes and includes off-label use. For example, you might recommend this treatment for a pseudophakic patient who is age 80 or older who we might think is beyond the age of what we think of as presbyope.

In general, topical options work in diverse groups of patients, and they don't have to be the ideal patient for topical treatments to be an option. They're safe, they're affordable, and they can yield successful results in a wide variety of patients. Perhaps instead of asking why we should prescribe a certain patient a topical treatment, we should ask, "Why not?" Why wouldn't you offer a new technology with the potential to help our patients?

On the other hand, while it may be tempting to see these treatments as a cure-all, topical drops should not be seen as a panacea that supersedes all other treatment options. Instead drops, along with glasses and contacts, should be viewed as one tool in the toolbox and one which can give a patient the ability to function without glasses even for a short period of time. We can prescribe spectacles, contact lenses, and/or drops.

TALKING TO PATIENTS ABOUT TOPICAL TREATMENTS

An open dialogue with your patients is crucial to successful treatment with topical options. What are your patients' goals? Do they want to go on dates in the evenings without needing to wear spectacles to read the menu? Do they need it for a few hours in the morning so they can see their smartwatch while out for a run?

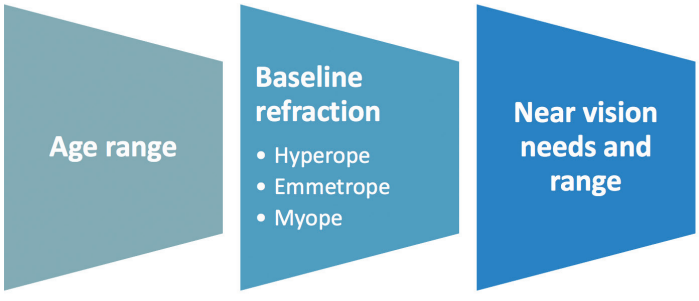


Figure 2. Things to consider when choosing which patients are suited for topical presbyopia treatment.

Will the topicals be used habitually or situationally? Finding out the time, duration, and circumstance that they want to achieve spectacle independence is key in customizing the treatment, especially when other options become available.

Moreover, counseling patients about the potential side effects is vital. We know these drops can burn, but data shows that for the current FDA-approved option of these drops the pH begins to be neutralized starting within 15 seconds and has the natural pH of the tear after one minute. Eventually, we'll get a better handle on whether this issue affects compliance, but at this point, tolerability does not seem to be a major concern. If patients are not counseled, however, then these side effects become complications.

It is also important to discuss costs with your patients. These presbyopia drops are affordable, and their price has not been an issue in my practice. In fact, cost may even improve adherence because if patients are invested and excited, they're more likely to use the drops.

KEY TAKEAWAYS

Topical drops for the treatment of presbyopia are here, and options will soon grow to include diverse modes of delivery and mechanisms of action. While the middle-aged presbyopic patient may be the ideal candidate for topical treatments, experience has shown topical options to be effective in a number of populations. The key to making things work is talking to your patients early to determine their treatment goals and to begin the extensive discussions about potential side effects and discomfort that could decrease compliance.

1. Kinney M, Johnson AD, Reddix M, McCann MB. Temporal effects of 2% pilocarpine ophthalmic solution on human pupil size and accommodation. *Military Medicine.* 2020;185(Supplement_1): 435-442.
2. https://clinicaltrials.gov/ct2/show/NCT04599933
3. https://clinicaltrials.gov/ct2/show/NCT04599972
4. https://clinicaltrials.gov/ct2/show/NCT04657172
5. https://clinicaltrials.gov/ct2/show/NCT05135286
6. https://clinicaltrials.gov/ct2/show/NCT05119920
7. https://clinicaltrials.gov/ct2/show/NCT04675151
8. https://clinicaltrials.gov/ct2/show/NCT03809611

Expanding Cataract Patient Needs With Next Generation Presbyopia-Correcting IOLs

Finding the Right Presbyopia-Correcting IOL to Fit Your Patients Needs

CECELIA C. KOETTING, OD, FAAO, DIPL ABO

A lot of new presbyopia-correcting intraocular lens (IOL) technologies have come to market during the past 5 to 10 years. I will review these technologies, shown in the Figure, and the factors to consider when matching patients to the appropriate lens, followed by case studies that underscore these points.

"It's important to match the patient with the optimal presbyopia-correcting IOL."

–Cecelia C. Koetting, OD, FAAO, Dipl ABO

PRESBYOPIA-CORRECTING IOL OPTIONS

Enhanced Monofocal IOL

The Enhanced Monofocal IOL (Tecnis Eyhance, Johnson & Johnson Vision) features a refractive technology that lacks rings. Instead, a higher order asphere creates a slightly extended depth, and its power changes continuously from the center to the periphery of the lens. The lens also has a larger landing zone than a standard aspheric monofocal IOL, making it more tolerant of residual refractive error. This is an option for patients who are not otherwise good candidates for traditional multifocal or a premium IOL because they have comorbidities such as corneal irregularities or macular problems. Because it is a monofocal lens, the distance vision is high quality and pupil independent. This IOL provides good intermediate and distance vision and has a dysphotopsia profile similar to a monofocal IOL, making it ideal for drivers/pilots.

Wavefront-Shaping EDOF IOL

The AcrySof IQ Vivity (Alcon) is a wavefront-shaping IOL that, similar to enhanced monofocals, provides a continuous range of vision for distance to intermediate. This is a good option for patients who seek reduced spectacle dependence for most activities, especially those who live active lifestyles. It is not ideal for patients who have severe dry eye, retinal diseases, irregular astigmatism, or moderate to severe glaucoma.

Hybrid Multifocal/EDOF IOL

The Tecnis Synergy (Johnson & Johnson Vision) is a hybrid multifocal EDOF IOL that combines diffractive multifocal and EDOF technologies. It provides negative spherical aberration correction and a violet filter that enhances contrast and offers a broad defocus range with excellent near vision while providing higher contrast under lower light conditions. It is ideal for patients that require both distance and near vision because it provides a wide range of continuous vision. This technology uses rings which can cause issues such as halos and glare, especially around lights when driving at night. This should not be used in patients with irregular astigmatism, retinal diseases, severe dry eye, corneal dystrophies, or glaucoma.

Small Aperture IOL

The IC-8 small aperture IOL (AcuFocus) is an exciting new IOL that was FDA approved in July 2022.[1] The small aperture IOL is designed to filter out unfocused and aberrated peripheral light to focus light on the retina. It uses a black circle that creates the same pinhole effect that we are getting from the presbyopia drops. This IOL can

Figure. Presbyopia-correcting IOL options.

tolerate as much as 1.50 D of astigmatism.[2] It is ideal in patients that have been successful with monovision or multifocal contact lenses but should not be used in patients with macular diseases.

Light Adjustable Lens

The Light Adjustable Lens (RxSight) is the only currently available FDA-approved IOL that allows surgeons to fine-tune the final IOL power in the first few months postoperatively. It does so by altering its shape in response to UV light. These adjustments can be made up to three times before the final treatment is locked. This is a good option for patients seeking monovision, as well as for use in patients who may have previous corneal refractive surgery such as RK, LASIK and PRK.

PATIENT SELECTION IS KEY

It's important to match the patient with the optimal presbyopia-correcting IOL. We need to look at our patient's visual needs, lifestyle, and daily activities, as well as concerns about dysphotopsia and comorbidities.

It's important to ask key questions to our patients. What are the patient's expectations? How has the patient been functioning, taking glasses off to read, or wearing full time? What are their treatment goals? Is this a type A patient that is going to be unhappy with whatever you give them? Does this patient have any comorbidities that should be considered?

The following case studies underscore these points and provide a sense of how to match patients with the IOL that will give them the best result.

CASE #1

Patient: A 59-year-old big rig driver does not currently wear glasses and is having some problems with glare at night and seeing his dashboard. Anterior segment evaluation reveals 2+ nuclear sclerotic cataracts (NSC) and 2+ cortical cataracts (CC). His VA is 20/30 OD and OS BCVA and 20/150 and 20/200 OD/OS with glare.

The remainder of the exam is unremarkable, and he is otherwise healthy.

"We need to look at the patient's visual needs, lifestyle, and daily activities, as well as concerns about dysphotopsia and comorbidities."

—Cecelia C. Koetting, OD, FAAO, Dipl ABO

Analysis: Given that he drives a rig, he'll probably be doing a lot of driving, especially at night. We, therefore, want to make sure he has the best-corrected distance vision. We do not want to decrease his depth of focus with monovision using a monofocal IOL. On the other hand, we want to provide him good intermediate vision so he can still read his dashboard.

Treatment: For these and other considerations, a wavefront-shaping EDOF IOL was selected because this will give both good distance and intermediate vision. This approach has allowed him to see the road while night driving and read his dashboard.

CASE #2

Patient: A 62-year-old sixth grade teacher with cataracts. She is currently wearing monovision contact lenses, with OD for distance. She notes difficulty with driving at night and says her near vision is not as clear as it used to be. Her VA is 20/50 BCVA and 20/70 and 20/80 OD/OS with glare. She has 2+ NSC and 2+ CC.

Analysis: While this patient may be good for many options, it's important to note that since the patient is already used to monovision, a monofocal IOL monovision option is a great option for this patient. The next decision is what to put in the other eye. And with any of these options, we want to set expectations accordingly.

Treatment: In this case, we selected a monofocal IOL for the right eye and a small aperture IOL for the left, and she was happy. She can read her computer and smart board while teaching her class.

CASE #3

Patient: A 78-year-old grandfather loves using TikTok with his grandkids but is having trouble seeing his phone and driving at night. He currently wears glasses but would like to use them less and really wants the new multifocal/EDOF IOL he has learned about through TikTok. Importantly, he has concurrent early dry age-related macular degeneration (AMD) in both eyes and is

taking AREDS vitamins. The patient has 2+ NSC and 3+CC. His VA is 20/60 OD and 20/50 OS BCVA with glare 20/400 OD/OS.

Analysis: Because this patient has AMD, multifocal IOLs may not be ideal. We want as much light to reach his macula as possible. He needs all of that. In cases like these, I also recommend consulting a retina specialist.

Treatment: This patient underwent cataract surgery with enhanced monofocal presbyopia-correcting IOLs in both eyes. He's very happy with his improved night driving and can still see his phone to watch TikTok videos. However, he does require over-the-counter readers for very small print.

CASE #4

Patient: A 58-year-old accountant loves her job and high-end lifestyle, but also biking. The patient has 2+ posterior subcapsular cataracts with BCVA 20/40 OD and 20/25 OS. Glare is 20/70 OD and 20/60 OS. The remainder of her exam is unremarkable. She would like spectacle independence and is willing to make slight compromises on distance/near vision.

Analysis: This patient wants continuous vision at distance and near. Her job requires her to have good contrast during the day and at night. She has no irregular astigmatism, retinal disease, dry eye, glaucoma, or corneal disorders.

Treatment: In this case, I went with hybrid multifocal/EDOF IOLs in both eyes, and this patient is very happy with her results. She can read the numbers on her computer and ride her bike without glasses. The patient has noticed some halos around lights at night, but it's not a bothersome issue.

CASE #5

Patient: A 75-year-old retired woman loves spending her free time gardening. She has moderately impaired vision, which is worse at night, and notes some glare in both eyes for the last 6 months. Her VA is 20/40-2 OD and 2-/50O OS. Notably, her cornea is clear, and she has no anterior or posterior segment disease. She would like to be free of glasses and has worn monovision contact lenses in the past.

Analysis: This patient's history of monovision makes her a good candidate for monovision again.

Treatment: This patient had light adjustable lenses implanted in both eyes, with the right eye set for distance and the left eye set for near. After two light delivery device treatments and two lock-in treatments, the appropriate vision goal was achieved in each eye, and the patient is happy with her vision.

1. Hutton D. FDA approves the AcuFocus IC-8 small aperture IOL for cataract surgery. *Ophthalmology Times*. July 25th, 2022. https://www.ophthalmologytimes.com/view/fda-approves-the-acufocus-ic-8-small-aperture-iol-for-cataract-surgery
2. Ang, R. E. Small-aperture intraocular lens tolerance to induced astigmatism. *Clinical Ophthalmology (Auckland, NZ)* 2018;12:1659.

A Guide Through the Presbyopia Patient Journey

Keys to Patient Discussions

SELINA R. MCGEE, OD, FAAO, DIPL ABO

We should be thinking of presbyopia as a journey with different stages. The beginning of the journey is different from the middle which is different from the more advanced phases of the journey. Our job as optometrists is to educate, guide, and prescribe along that journey. But how do we do that? I'll summarize an overall approach to guiding patients and how to address some specific concerns.

TALK TO YOUR PATIENTS EARLY

At all stages, patient communication is key to success. We can have the most advanced technology in the world, whether it be drops or premium IOLs, but if we cannot have a real conversation and connect with our patients in the chair, that technology is irrelevant.

As optometrists, our first step in helping them along their presbyopia journey is to be proactive rather than reactive in talking about presbyopia. I begin talking about presbyopia when my patients are young, typically age 37 or 38, because I do not want them to be surprised about what's to come.

We are taught that presbyopia happens slowly, but that isn't always the case. I am presbyopic and slow progression doesn't at all describe my journey. One day I could see my daughter's face when I hugged her and the next day, it was blurry, and I had to back up just a bit to see her beautiful features in detail. Prepare your patients for that possibility.

We polled optometrists about how often they discuss presbyopia drops with their patients who are age 40 to 55 years: always, sometimes, never. Only 13% reported they always talk to these patients about presbyopia drops.

This number needs to be higher. We do not want patients walking out of our office, hearing about presbyopia somewhere else, and then wondering why they didn't hear about it through their optometrist. When that does happen, they inevitably lose some degree of trust in us.

A 2019 *Modern Optometry* survey asked how likely an optometrist is to discuss presbyopia-correcting IOL options with their patients who need cataract surgery. Keep in mind that for these patients, it's different from a drop and they'll be married to their technology for the rest of their lives. Yet still, as shown in the Figure, the survey found that 32% of respondents were not likely to discuss presbyopia-correcting options.

Why are so many optometrists not discussing presbyopia-correcting IOLs? This is a missed opportunity. We spend half of our lives presbyopic and we can only have cataract surgery once, so

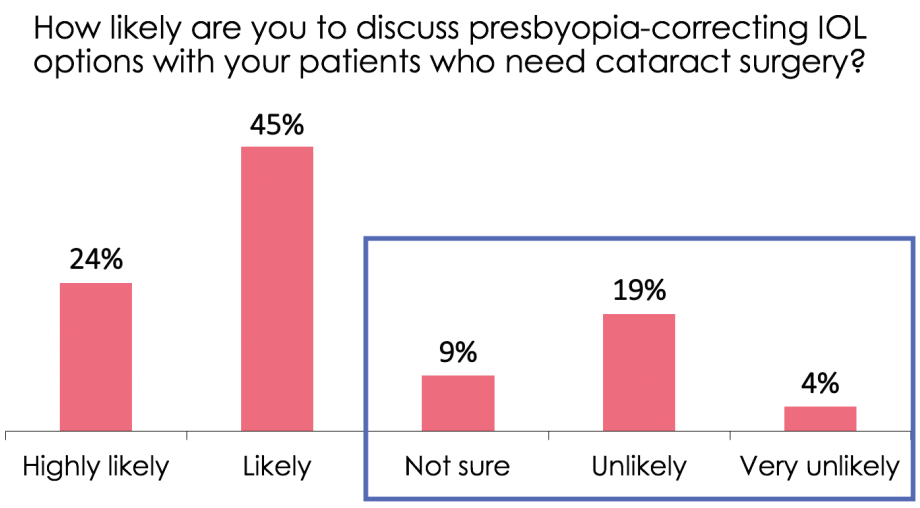


Figure. In a 2019 *Modern Optometry* Survey, 32% of respondents indicated they were either unsure or unlikely to discuss presbyopia-correcting IOL options with their cataract patients.

let's do it right the first time. We want our patients to have great vision and functional vision for the rest of their life, and we have the technology to do so. As with discussing presbyopia-correcting drops, we need to do a better job of discussing IOL options with these patients.

We should prompt our patients to think about cataracts and presbyopia as normal parts of aging. If we live long enough, we're probably going to develop both. I use the analogy of gray hair and wrinkles. We all accept those as normal parts of aging, and we should be thinking of presbyopia and cataracts in the same way. It's normal to hit all these milestones with age. They're part of the journey.

THE DISCUSSIONS

The next step is to review how we can respond to a few specific goals or concerns that patients might raise.

"I'm 45 years old and I hate my reading glasses! I'm going to do anything possible to get rid of them. Tell me what I can do to never need my reading glasses again."

A patient comes to you with the above concern. An exam reveals the patient is an emmetropic presbyope. What do you do?

One possibility is the new pilocarpine drops. On the other hand, because the patient seems to want a permanent solution, drops may be a gateway drug to surgery. Presbyopia-correcting IOLs are an option, but a 45-year-old emmetrope with good distance vision and some accommodation may not be the best candidate for cataract surgery. Contacts, especially if used in conjunction with drops, is one possible solution. The key point here is recognize that patients can be prescribed more than one option.

Whatever route you choose, you'll need effective communication with the patient. My approach in this situation is to tell the patient: "These are the options we have and someday we're going to have more options as we go through this journey. But if X is important to you, then we can do Y." We want to be thinking not only about what option is best for the patient, but also how best to communicate that to the patient. Customize your prescription for each patient's lifestyle.

"Can you guarantee that I'll no longer need my reading glasses after I spend all this money on this treatment?"

The answer here is "no." You cannot make any guarantees. Tell the patient you're going to do everything you can to make sure you put them in a position to achieve the best possible vision, but it's surgery and there's just no way of making that guarantee. Moreover, if someone does not have realistic expectations, then they're not a good candidate. Those are the patients who you must accept as untreatable because the result will never meet their expectations.

It's all about setting expectations, and making guarantees is not the way to make those expectations reasonable. It's possible the low rate of discussion about presbyopia-correcting IOLs is because we're worried about how the patient might respond to disappointing results. I always say, "Nothing is perfect, and we're not guaranteeing anything, but I'm going to help you be the least dependent on your glasses as possible."

If we set those expectations correctly on the front end, then the concerns about the cost go away. We have to get out of the patient's pocketbook. That's not fair for us to spend or not spend our patients' disposable income.

"This seems super expensive. Why would I invest in the presbyopia treatment options that you're recommending?"

The point you want to emphasize in this situation is this is an investment in their health and their vision. You invest in homes, cars, and hobbies. Ask patients why they do not see the appeal in investing in their vision. Ask them what they would like to achieve without relying completely on spectacles. Breaking it down for them, what they'll spend over the next however many

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years, and explain what that will mean to them to be less dependent on glasses. Present them with the options and make sure they understand the benefits.

It's okay to discuss the specific dollars and cents and put that in the context of the value the treatment will bring to the patient. Don't be apologetic about the cost.

It's worth spending time learning how to have these conversations with your patients. Practice these discussions so you're confident in your knowledge because our patients value our opinions. Invest the time to educate yourself so the patients understand and will invest in the technology that has the potential to improve their lives.

"Can you please educate me on all available options for presbyopia treatments so I can make an informed decision?"

I tell patients I will review all the appropriate options and explain why each option is or is not right for them based on my examation, their measurements and what I believe is going to be best for them. I discuss spectacles, contact lenses, drops, and surgical options and I narrow it down to what's most appropriate for today. Keep it simple. Never make assumptions, and learn to effectively communicate their option for today and what they could potentially do in the future. This ensures the patients stay with you for the duration of their presbyopia journey and beyond.

"Look at all these treatment options I found on the internet! Can we go through my list of pros and cons?"

When a patient brings in the four-page sheet they've printed and highlighted, I know I need to approach this patient carefully. I usually say, "I love that you've done your research. Let's talk about that." It's great these patients are excited but remember that we know more about this field than they do and it's our responsibility to guide them toward the option that will provide the best outcome.

KEY TAKEAWAYS

Have conversations about presbyopia correction options early and often, and never guarantee anything. Be honest about your cost and be confident when you discuss options.

Guide patients through their options and prescribe accordingly, manage and set their expectations, and empower your patients to make the correct decision for themselves. Just be mindful that these presbyopia conversations are going to change as the patients pass through their journey, every patient is different, and both you and the patient need to be ready for whatever comes your way. ■

GROWING YOUR OPTOMETRIC PRACTICE WITH THE NEW SPECTRUM OF PRESBYOPIA TREATMENTS

COPE Release Date: September 27, 2022
COPE Expiration Date: September 30, 2023

INSTRUCTIONS FOR CREDIT

To receive credit, you must complete the attached **Pretest/Posttest/Activity Evaluation/Satisfaction Measures** Form and mail or fax to Evolve Medical Education LLC; 353 West Lancaster Avenue, Second Floor, Wayne, PA 19087; Fax: (215) 933-3950. To answer these questions online and receive real-time results, go to https://evolvemeded.com/course/2210-supp. If you experience problems with the online test, email us at info@evolvemeded.com. *NOTE: Certificates are issued electronically.*

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DEMOGRAPHIC INFORMATION

Profession
___ MD/DO
___ OD
___ NP
___ Nurse/APN
___ PA
___ Other

Years in Practice
___ >20
___ 11-20
___ 6-10
___ 1-5
___ <1

Patients Seen Per Week (with the disease targeted in this educational activity)
___ 0
___ 1-15
___ 16-30
___ 31-50
____ >50

Region
___ Midwest
___ Northeast
___ Northwest
___ Southeast
___ Southwest

LEARNING OBJECTIVES

Did the program meet the following educational objectives?	Agree	Neutral	Disagree
Define the prevalence, etiology, and key characteristics of progression of presbyopia from early to late-stage patients	_____	_____	_____
Outline strategies for finding, communicating with, and educating patients about presbyopia correction clinical outcomes, costs, risks, and benefits, including quality of life and quality of vision considerations	_____	_____	_____
Describe how the latest presbyopia-correcting IOL technologies, multifocal contact lenses and pharmaceutical presbyopia treatments can address outcomes in a new group of presbyopia patients, including those with comorbid conditions	_____	_____	_____

POSTTEST QUESTIONS

Please complete at the conclusion of the program.

1. Based on this activity, please rate your confidence in your knowledge and ability to outline strategies for communicating with patients about presbyopia correction clinical outcomes, including quality of life and quality of vision considerations (based on a scale of 1 to 5, with 1 being not at all confident and 5 being extremely confident).

a. 1
b. 2
c. 3
d. 4
e. 5

2. Approximately how many people worldwide have presbyopia?

a. 50 million
b. 180 million
c. 500 million
d. 1.8 billion

3. What percentage of current referred/comanaged cataract patients receive presbyopia-correcting intraocular lenses (IOLs)?

a. 10%
b. 25%
c. 42%
d. 63%

4. What is the mechanism by which pilocarpine drops correct presbyopia?

a. Stimulates miosis and ciliary body contraction
b. Softens the lens
c. Stimulates ciliary body contraction only
d. Stimulates mydriasis

5. How many topical drops have been approved by the FDA for the treatment of presbyopia?

a. None, but several have promising phase 3 results
b. One, but there are several more currently in phase 3 trials
c. Two, high-dose (1.25%) and low-dose (0.4%) pilocarpine
d. Seven, each with different mechanisms of action and modes of delivery

6. A 60-year-old woman with moderate macular degeneration and 2+ NSC presents for a cataract evaluation. Her VA is 20/50 OD and 20/60 OS. With the brightness acuity test, her VA is 20/100 OD/OS. What IOL would you recommend for the patient?

a. Enhanced monofocal IOL
b. Wavefront-shaping extended depth of focus (EDOF) IOL
c. Hybrid multifocal/EDOF IOL
d. Small aperture IOL
e. Light adjustable IOL

7. Which presbyopia-correcting IOL uses a negative spherical aberration correction and a violet filter that enhances contrast and offers a broad defocus range with excellent near vision while providing higher contrast under lower light conditions?

a. Enhanced monofocal IOL
b. Wavefront-shaping EDOF IOL
c. Hybrid multifocal/EDOF IOL
d. Small aperture IOL
e. Light adjustable IOL

8. A 70-year-old man presents for a cataract consultation. He has 3+ NSC and the rest of the exam is unremarkable. He wants spectacle independence but is concerned about refractive surprises. Which presbyopia-correcting IOL allows for postoperative adjustments to be made and may ease his concern?

a. Enhanced monofocal IOL
b. Wavefront-shaping EDOF IOL
c. Hybrid multifocal/EDOF IOL
d. Small aperture IOL
e. Light-adjustable IOL

9. Small aperture IOL should not be used in patients with _____.

a. Astigmatism
b. Corneal dystrophies
c. Dry eye
d. Macular diseases

10. What percentage of optometrists say they are unsure or unlikely to discuss presbyopia-correcting IOLs with their cataract patients?

a. 12%
b. 32%
c. 52%
d. 72%

11. Under which conditions is it reasonable to guarantee a patient that presbyopia-correcting IOL treatment will result in spectacle independence?

a. If a retina specialist agrees on the treatment plan
b. When the patient is unwilling to undergo treatment without any guarantee of success
c. When the presbyopia is mild and it's obvious that a presbyopia-correcting IOL will correct their presbyopia
d. Never, under no circumstances should you make guarantees about clinical outcomes

ACTIVITY EVALUATION

Your responses to the questions below will help us evaluate this activity. They will provide us with evidence that improvements were made in patient care as a result of this activity.

Rate your knowledge/skill level prior to participating in this course: 5 = High, 1 = Low____

Rate your knowledge/skill level after participating in this course: 5 = High, 1 = Low____

This activity improved my competence in managing patients with this disease/condition/symptom. _____ Yes _____No

Probability of changing practice behavior based on this activity: _____High _____ Low _____No change needed

If you plan to change your practice behavior, what type of changes do you plan to implement? (check all that apply)

Change in pharmaceutical therapy _____
Change in nonpharmaceutical therapy _____
Change in diagnostic testing _____
Choice of treatment/management approach _____
Change in current practice for referral _____
Change in differential diagnosis _____
My practice has been reinforced _____
I do not plan to implement any new changes in practice _____

Please identify any barriers to change (check all that apply):

_____ Cost
_____ Lack of consensus or professional guidelines
_____ Lack of administrative support
_____ Lack of experience
_____ Lack of time to assess/counsel patients
_____ Lack of opportunity (patients)
_____ Reimbursement/insurance issues
_____ Lack of resources (equipment)
_____ Patient compliance issues
_____ No barriers
_____ Other. Please specify: _____

The design of the program was effective for the content conveyed	___ Yes	___ No
The content supported the identified learning objectives	___ Yes	___ No
The content was free of commercial bias	___ Yes	___ No
The content was relative to your practice	___ Yes	___ No
The faculty was effective	___ Yes	___ No
You were satisfied overall with the activity	___ Yes	___ No
You would recommend this program to your colleagues	___ Yes	___ No

Please check the Core Competencies (as defined by the Accreditation Council for Graduate Medical Education) that were enhanced through your participation in this activity:

_____ Patient Care
_____ Practice-Based Learning and Improvement
_____ Professionalism
_____ Medical Knowledge
_____ Interpersonal and Communication Skills
_____ System-Based Practice

Additional comments:

_____

_____ I certify that I have participated in this entire activity.

This information will help evaluate this activity; may we contact you by email in 3 months to inquire if you have made changes to your practice based on this activity? If so, please provide your email address below.

_____

_____

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