

A Single Focus on Multifocal Patients: Enhancing Patient Care and Building Expertise

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Course Description

In the field of eyewear dispensing, understanding the diverse needs of patients is crucial for providing optimal visual solutions. The first key learning centers on the importance of fitting eyewear for specific tasks, highlighting how tailored eyewear can enhance both patient satisfaction and dispenser effectiveness by addressing unique lifestyle and occupational visual demands. The second key learning delves into the various types of eyewear and their applications, exploring multifocal lenses—such as bifocals, trifocals, and progressives—and their suitability for presbyopia, alongside single vision lenses for different visual tasks. Finally, the third key learning focuses on calculating single vision prescriptions, offering detailed guides and practical examples for single vision readers and intermediate vision needs, while emphasizing best practices to avoid common errors and ensure precision. By mastering these areas, dispensers can significantly improve their service quality and patient outcomes.

Course Objectives

Upon completing this course, the ECP will be able to:

- Apply knowledge of a patient's lifestyle and occupational visual demands to fit an optimal pair of eyewear
- Describe various types of multifocal eyewear and their applications
- Calculate single vision eyewear from a multifocal prescription

Course Outline

1. Fitting Eyewear for Specific Tasks (20 minutes total)
 - Importance of Task-Specific Eyewear (10 minutes)
 - Benefits to Patients
 - Benefits to Dispensers
 - Assessing Patient Needs (10 minutes)
 - Lifestyle and Occupational Considerations
 - Visual Demands of Different Tasks
2. Types of Eyewear and Their Applications (20 minutes total)
 - Multifocal Lenses (10 minutes)

- Presbyopia and its Impact
- Bifocals
 - Structure and Function
 - Limitations
- Trifocals
 - Structure and Function
 - Limitations
- Progressive Lenses
 - Structure and Function
 - Limitations
- Single Vision Eyewear (10 minutes)
 - Distance Vision
 - Computer Vision
 - Close-up Activities
 - Advantages of Single Vision Lenses
- 3. Calculating Prescriptions (20 minutes total)
 - Single Vision Readers (7 minutes)
 - Step-by-Step Calculation Guide
 - Practical Examples
 - Intermediate Vision Prescriptions (8 minutes)
 - Step-by-Step Calculation Guide
 - Practical Examples
 - Best Practices for Accurate Prescriptions (5 minutes)
 - Common Errors to Avoid
 - Tips for Ensuring Patient Satisfaction



A Single Focus on Multifocal Patients:

Enhancing Patient Care
and Building Expertise

Mark Clark, MBA, ABOC



Learning to fit eyewear for specific tasks is not only beneficial to the patient, but it can also position the dispenser as an eyewear expert. Your ability to design and fit custom lens options can greatly enhance your credibility and patient loyalty.

Topics Covered

- ▶ Importance of fitting specialty eyewear
- ▶ Important formulas
- ▶ Example calculations
- ▶ Benefits to the patient and the dispenser



This presentation covers the essentials of fitting eyewear for specific tasks, emphasizing the benefits to both patients and dispensers. It delves into multifocal lenses, designed for individuals with presbyopia, detailing the distinct functions and limitations of bifocals, trifocals, and progressive lenses. The presentation also highlights the advantages of single vision eyewear for distance, computer, and close activities, emphasizing their simplicity and targeted benefits. Additionally, it explains the methods for calculating prescriptions for single vision readers and intermediate vision, including step-by-step guides and practical examples. By understanding these topics, dispensers can enhance their expertise, patient satisfaction, and loyalty.

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The Power of Communication



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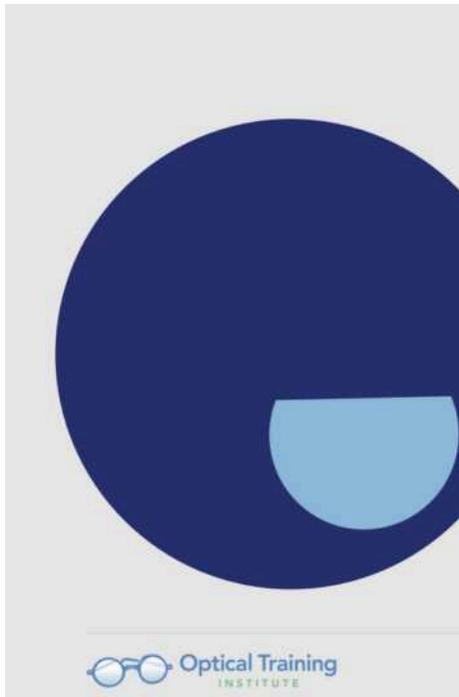
Communication is the key. The dispenser needs to understand the needs of the patient in each portion of their daily activities. In order to design eyewear for their needs, they need to discuss the hobbies and work habits of the patient to inform their recommendations. The patient is looking to the dispenser as the expert.



Multifocal Lens Overview

- ▶ Bifocals: Near and Far
- ▶ Trifocals: Near, Intermediate and Far
- ▶ Progressives: Near, Intermediate, and Far

Multifocal lenses, while offering the convenience of addressing multiple vision needs in one lens, come with specific limitations depending on the type: bifocals, trifocals, and progressive lenses. Each type has its unique challenges for certain tasks.



Bifocals

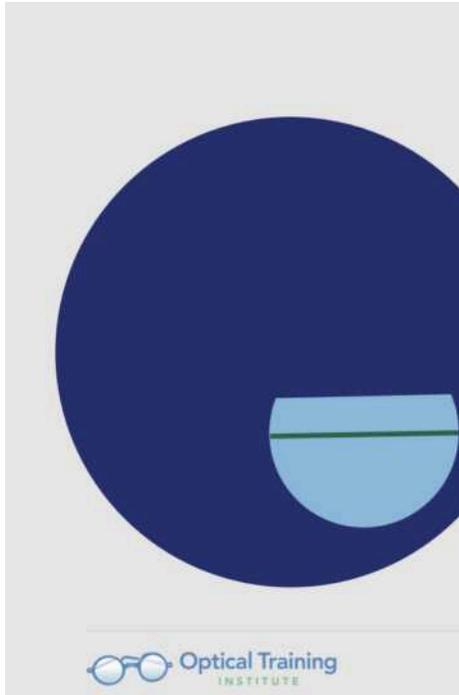
- ▶ Description: Near and Far viewing
- ▶ Limitations:
 1. No intermediate
 2. Image jump
 3. Aesthetic concerns
 4. Temporary solution

Bifocal lenses are divided into two distinct sections: the upper part for distance vision and the lower part for near vision, but there are limitations:

Limitations:

1. Intermediate vision tasks: Bifocals lack an intermediate vision zone, making tasks like computer work or viewing objects at arm's length uncomfortable. Users may find themselves constantly tilting their heads to find a clear view.
2. Image jump: The abrupt change between the two viewing zones can cause an "image jump" when moving the eyes from the distance to the near zone, which can be disorienting.
3. Aesthetic concerns: The visible line separating the two zones can be cosmetically unappealing to some users.
4. Temporary usability: Patients who are fit with a lined bifocal will soon need intermediate accommodation. Since the bifocal offers only near (about 16 inches) and infinity (at the top), the patient will eventually complain that their bifocal no longer helps them.

These scenarios are often overlooked in dispensing as the patient ages. The optometrist adjusts the ADD power and often assumes that the optician will inform them if the patient needs to convert to a trifocal or progressive while the optician assumes that the optometrist will inform the patient of the potential design change. The common result is that the patient returns shortly after receiving their new bifocal complaining that they cannot see intermediate distance objects.



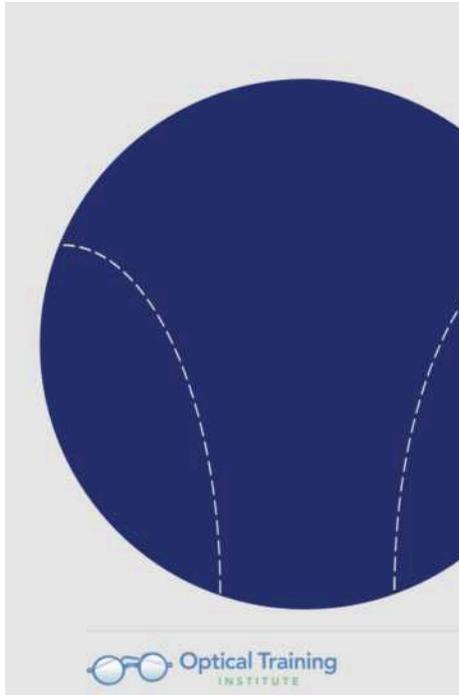
Trifocals

- ▶ Description: Near, Intermediate, and Far viewing
- ▶ Limitations:
 1. Segment discomfort
 2. Narrow Intermediate
 3. Aesthetic concerns

Description: Trifocal lenses include three distinct sections: the top for distance vision, a middle section for intermediate vision, and the bottom for near vision.

Limitations:

1. Segmental discomfort: The presence of three distinct zones can lead to discomfort or difficulty in adjusting the eyes, especially for tasks requiring quick refocusing between distances.
2. Narrow intermediate zone: The intermediate zone in trifocals can be narrow, limiting its effectiveness for extended computer use or other intermediate tasks. The overall height of the common trifocal design is only 7-8 millimeters. This may be challenging for some tasks. This also may require a lot of head tilt in order to achieve the proper zone.
3. Visible lines: Similar to bifocals, trifocals have visible lines separating the zones, which can be distracting and cosmetically unappealing.



Progressive

- ▶ Progressive Lens:
No line with near, intermediate, and far
- ▶ The “one size fits all” options for daily

Progressive lenses provide a smooth, gradual transition between multiple focal points (distance, intermediate, and near), with no visible lines. The benefit of these lenses is a “one size fits all” approach where the user is able to see at each distance. But I often explain to users that just as an SUV may be a multi-purpose vehicle, it isn’t necessarily good for the racetrack or for hauling dirt. A person’s lifestyle may necessitate additional pairs of eyewear.



Limitations of Progressives

- ▶ Peripheral distortion
- ▶ Adaption issues
- ▶ Limited Intermediate
- ▶ Cost
- ▶ Reading fine print
- ▶ Limited tasks / use
- ▶ Custom fit

1. Peripheral distortion: The lens design can cause peripheral distortion or "swim effect," where the edges of the visual field appear blurry or distorted.
2. Adaptation period: Users often require an adaptation period to get used to the smooth transition between zones. Initial discomfort and dizziness are common.
3. Limited intermediate width: Despite the seamless transition, the intermediate zone can still be relatively narrow, posing challenges for tasks like computer work, where a wider field of intermediate vision is beneficial. For modern computer users with multiple screens, this can be a considerable challenge. For new progressive wearers, I often ask them how many computer screens they typically use when working.
4. Cost: Progressive lenses tend to be more expensive than bifocals and trifocals.
5. Reading small print: Multifocal lenses might not be as effective for prolonged reading of very small print, requiring users to use additional magnifying tools or separate reading glasses.
6. Specific task optimization: No single lens type can be perfectly optimized for all tasks, meaning that users might still face challenges with specific activities, such as extended computer use, detailed craftwork, or sports.
7. Custom fit: Proper fitting and customization by an experienced optometrist are crucial. Poor fitting can exacerbate the limitations and discomfort associated with multifocal lenses.



Designing Custom Single Vision Eyewear

- ▶ Task specific
- ▶ Distance specific
- ▶ Enhanced acuity
- ▶ Enhanced comfort
- ▶ Simple adaptation

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By understanding these limitations, users can make more informed decisions and possibly consider having different types of glasses for different activities, ensuring the best possible vision correction for their lifestyle.

Single vision eyewear is designed to correct vision for a specific distance, offering several benefits for distance, computer, and close activities. The following three slides provide a detailed look at the advantages for each type of activity.

Distance Eyewear



Wide Field
of Vision



Reduced
Eye Strain



Optimal
Peripheral Vision



Cost-Effective

Single vision lenses for distance are typically prescribed to correct nearsightedness (myopia) or farsightedness (hyperopia).

Benefits:

1. Wide field of clear vision: These lenses provide a broad, uninterrupted field of vision for distant objects, making them ideal for activities like driving, watching TV, or outdoor sports.
2. Reduced eye strain: They minimize the effort required to focus on distant objects, reducing eye strain and fatigue.
3. Optimal peripheral vision: Single vision lenses do not have the peripheral distortions often associated with multifocal lenses, providing clearer side vision.
4. Cost-effective: They are typically less expensive than multifocal lenses, making them a budget-friendly option for those primarily needing correction for a specific task such as sewing, computer use, reading, or driving.

Computer and Intermediate Single Vision



Enhanced Comfort

Reduces eye strain



Improved Posture

Less head tilt required



Wide Field of Vision

Patient is able to glance side-to-side



Blue Light Protection

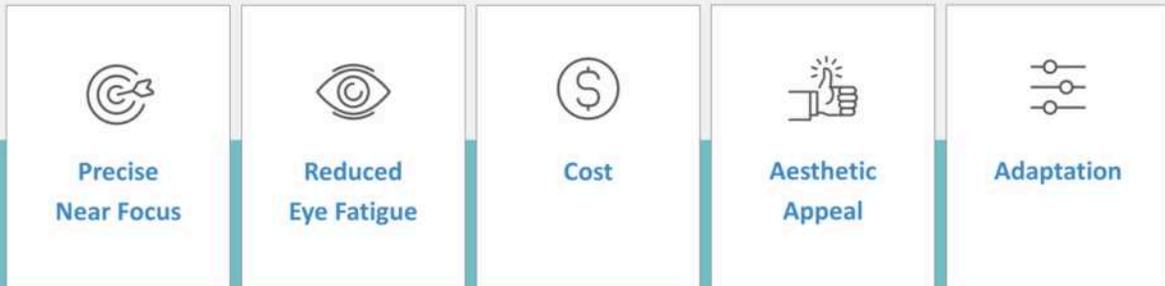
Embedded protection in many stock lenses

Single vision lenses for computer use are tailored to correct vision at the typical distance between the user and the computer screen, generally considered an intermediate range.

Benefits:

1. Enhanced comfort: Designed specifically for the intermediate range, these lenses reduce eye strain and discomfort associated with prolonged computer use.
2. Improved posture: Users do not need to tilt their heads or adjust their posture to find a clear focus, promoting better ergonomics.
3. Wide field of view: These lenses offer a clear, wide field of vision at the intermediate distance, making it easier to view multiple monitors or large screens. The patient is then able to glance around the screens without needing to move their head to stay in the clear zone of the progressive.
4. Blue light protection: Many single vision lenses are available in the market with embedded blue light protection in a stock single vision lens. This can be a cost effective option for the patient while increasing margins for the office.

Near Vision or Reading Glasses



Single vision lenses for near vision are typically prescribed for tasks requiring close focus, such as reading, sewing, or detailed work.

Benefits:

1. Precise focus: These lenses provide sharp, clear vision for close-up tasks, enhancing the ability to see fine details.
2. Reduced eye fatigue: By offering a tailored solution for near vision, these lenses help reduce eye fatigue and strain associated with prolonged reading or detailed work. This is an important option for patients with complex eye pathology which may limit their visual acuity across the visual field.
3. Customizable: Near vision lenses can be customized with additional features like anti-reflective coatings, further enhancing comfort and clarity during close-up tasks.
4. Cost: Single vision lenses are often less expensive for reading than other options.
5. Aesthetic appeal: Some wearers prefer the aesthetics of a lens without a line.

Summary of Single Focus Lens Options



Simplicity



Ease of Adaption



Cost



Aesthetic Appeal

General Benefits of Single Vision Eyewear

1. **Simplicity:** Single vision lenses offer a straightforward solution for specific vision needs, eliminating the complexity of adjusting to multiple focal points.
2. **Adaptation:** Users typically find it easier to adapt to single vision lenses compared to multifocal lenses, as there are no transitions between different vision zones.
3. **Cost:** Generally, more affordable than multifocal lenses, single vision lenses are a cost-effective option for individuals needing correction at one specific distance.
4. **Aesthetic appeal:** Some single vision lenses may have a thinner profile compared to some multifocal lenses, making them more aesthetically pleasing. They also do not have a visible line.

Single vision eyewear, tailored to correct vision at a specific distance, provides targeted benefits for distance, computer, and close activities. They offer clear, comfortable vision without the complexities and potential distortions of multifocal lenses. While they may require switching between different pairs of glasses for different tasks, their specialized focus can greatly enhance visual clarity and comfort for specific activities.

Creating Near Vision Single Focus Eyewear



Considerations



Calculations

Calculating the prescription for single vision readers from a bifocal prescription involves focusing on the ADD power value in the bifocal prescription, which indicates the additional correction needed for near vision. Before performing any calculations, be sure to review your state and local laws regarding what is allowable by a licensed optician in your area. Laws regarding what must be done by the refracting physician and the optometrist may vary by jurisdiction. This section will cover the step-by-step method for calculating.

Components of a Bifocal Prescription



Sample spherical prescription with ADD power:

- ▶ OD (Right Eye): -2.00 (distance) +2.00 (ADD)
- ▶ OS (Left Eye): -1.50 (distance) +2.00 (ADD)

Summary of distance and ADD power:

- ▶ OD distance: -2.00
- ▶ OS distance: -1.50
- ▶ ADD Power: +2.00

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A typical bifocal prescription includes values for distance vision and an ADD power for near vision. The format looks like this:

OD (Right Eye): -2.00 (distance) +2.00 (ADD)

OS (Left Eye): -1.50 (distance) +2.00 (ADD)

The distance part of the prescription is used for seeing far away. In the example above:

OD: -2.00

OS: -1.50

The ADD power value indicates the additional power needed for reading or close-up work. In this example:

ADD: +2.00 for both eyes

Calculation for Single Vision Near

Example Prescription

← OS (Left Eye): -1.50 (distance) +2.00 (ADD)	→ OD (Right Eye): -2.00 (distance) +2.00 (ADD)
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Step-by-Step Calculation

← OS (Left Eye) ▶ Distance: -1.50 ADD: +2.00 ▶ Reading Prescription: $-1.50 + 2.00 = +0.50$	→ OD (Right Eye) ▶ Distance: -2.00 ADD: +2.00 ▶ Reading Prescription: -2.00 $+ 2.00 = 0.00$	 Resulting Near RX OD 0.00 OS +0.50
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In order to derive the prescription for near vision from the bifocal prescription, simply combine the ADD power with the distance power to get the net near power. For a myope, the resulting number may be a negative number, and conversely it may be a higher positive number for a hyperope.

In this particular scenario, the resulting power for the right eye is plano. The resulting power for the left eye is only +0.50.

Additional Considerations

Prescriptions with astigmatism:

- ▶ OD -2.00 -0.50 x 180 +2.00 ADD
- ▶ OS -1.50 -0.75 x 90 +2.00 ADD

Calculated reading prescription:

- ▶ OD: Plano (0.00) - 0.50 x 180
- ▶ OS: +0.50 - 0.75 x 90

If the bifocal prescription includes a cylindrical correction (for astigmatism), you need to include this in the reading prescription. The ADD power value only affects the spherical component.

This slide shows a sample prescription with astigmatism correction converted to single vision near focus.

While the calculation is straightforward, it's always a good idea to have the final prescription verified by your eye doctor to ensure accuracy and suitability for the patient's needs.

In summary: To convert a bifocal prescription to single vision readers, simply add the ADD power value to the distance prescription for each eye. Ensure you include any cylindrical correction if applicable, and consult with an eye doctor for the best results.

Intermediate Power Calculations

The Ratio Method

The Dioptric Demand Method



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To calculate the intermediate power, there are two common methods: ratio and dioptric demand. The ratio method involves multiplying the prescribed near ADD power by a ratio which is related to the working distance. Basically, the ratio assumes that 16 inches or 40cm the percentage of add power is 100% (Be sure to check with the optometrist to know that this was the distance chosen, patients may describe different near distances). The ratio then assumes that the patient needs about 50% of their ADD power at intermediate. This may vary by patient. The dioptric demand method is more scientific and uses a formula to calculate the demand needed for each distance of focus.



The Ratio Method

- ▶ Understand the working distance
- ▶ Apply a ratio to the prescribed ADD power
- ▶ Calculate the final intermediate ADD power
- ▶ Trial frame the prescription

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Calculating the intermediate prescription from a multifocal (bifocal or progressive) prescription involves adjusting the prescription to focus on intermediate distances, typically around 20-30 inches, which is useful for tasks like computer work. This calculation typically involves using half of the ADD power value provided in the multifocal prescription. However, the patient's needs may vary based upon distance.

For the best result using the ratio method, I recommend the following method of determining the midrange power:

1. Using a trial frame, mockup the full prescription (distance plus the ADD power) in three options: 40% of the ADD power, 50% of the ADD power, and 60% of the ADD power.
2. Then, have the patient hold a reading card at the distance in which they will be using the task specific eyewear. For a computer screen, I will often have them sit at a desk to view a screen or hold the reading card for them.
3. Then, I will have them try each pair and record which one works the best for them.

Calculate the Intermediate Power with a Ratio



A typical multifocal prescription includes values for distance vision and an ADD value for near vision.

- ▶ The format looks like this:
 - OD (Right Eye): -2.00 (distance) +2.00 (ADD)
 - OS (Left Eye): -1.50 (distance) +2.00 (ADD)
- ▶ Identify the ADD value and multiply times the ratio *(for this example we will use 50%)*
 - For OD: -2.00 (distance) + 1.00 (half of ADD) = -1.00
 - For OS: -1.50 (distance) + 1.00 (half of ADD) = -0.50
- ▶ Resulting Intermediate prescription
 - OD -2.00 + 1.00 = -1.00
 - OS -1.50 + 1.00 = -0.50

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1. Understand the multifocal prescription: A typical multifocal prescription includes values for distance vision and an ADD value for near vision. The format looks like this:
OD (Right Eye): -2.00 (distance) +2.00 (add)
OS (Left Eye): -1.50 (distance) +2.00 (add)
2. Identify the distance prescription: The distance part of the prescription is used for seeing far away. In the example above:
OD: -2.00 OS: -1.50
3. Identify the ADD power value: The ADD value indicates the additional power needed for near vision. In this example:
Add: +2.00 for both eyes
4. If using 50% of the ADD power, calculate half of the ADD value: To determine the intermediate prescription, you typically use half of the ADD value. Add the half of the ADD value to the distance prescription to get the intermediate prescription.
For OD: -2.00 (distance) + 1.00 (half of add) = -1.00
For OS: -1.50 (distance) + 1.00 (half of add) = -0.50



The Dioptric Demand Method

Calculating Intermediate Power at Various Distances

This method involves using a formula to calculate the dioptric demand at each distance. In order to understand dioptric demand, we will look at the accommodative ability for each age group and the formula for demand.

Age and Accommodative Ability

Age relation to Dioptric Demand:

- ▶ Early 40s: +0.75 to +1.00 D
- ▶ Mid 40s: +1.00 to +1.50 D
- ▶ Late 40s: +1.50 to +1.75 D
- ▶ Early 50s: +1.75 to +2.00 D
- ▶ Mid 50s: +2.00 to +2.25 D
- ▶ Late 50s and beyond: +2.25 to +2.50

Presbyopia is an age-related condition where the eye gradually loses its ability to focus on near objects. The ADD power needed for reading or other close tasks generally increases with age. While individual needs can vary, here are typical guidelines that the eye doctor may refer to as a starting point when prescribing the ADD power. These are only estimates to show the relation to age and accommodation.

Adjusting for Various Distances

- ▶ Standard near distance = 40cm or 16 inches
- ▶ Demand power at 16 inches = +2.50
- ▶ Computer distance = 20-30 inches

Adjusting for Specific Distances

The ADD power is also influenced by the specific distance at which the near tasks are performed. Here's a step-by-step method to adjust the ADD power for different working distances using the formula for dioptric demand:

Determine the Near Working Distance:

Standard near working distance is typically around 40 cm (16 inches). This distance requires +2.50 of "demand power". Demand power is the amount of accommodation that the eyes need in order to focus at this distance. This is not the same as their ADD power. Their ADD power is a reflection of how much natural accommodation they have lost due to age. The ADD power is prescribed to help the patient reach the total demand power.

For computer work or other intermediate tasks, the distance might be around 50-75 cm (20-30 inches). If the patient seems unsure of their working distance, I may ask them to measure at their own desk or work station.



The Diopter Demand Formula

Step One:

Calculate the demand power ratio for the desired distance using the following formula: $D=1/f$

- ▶ In this formula, diopters are equal to 1 divided by the focal distance. The distance is always measured in meters.
 - Convert measurement to meters
 - Calculate in the formula
- ▶ The resulting number is the ratio of demand power needed at that distance.

It is assumed that an average patient needs +2.50 diopters of demand power in order to read at 16 inches or about 60cm. As we age, we lose this accommodative ability of this demand power. For example, a patient who is prescribed an ADD power of +1.50 is assumed to have about +1.00 of accommodation remaining for demand power. As the person ages, they lose this accommodation even more. This loss increases the need for accurate calculations of distance specific prescriptions. The less remaining accommodation that the patient has, the more they will need help with each specific distance. This is why some patients may be fine with a lined bifocal at first, but in the following years, may complain that objects at arm's length are also blurry. The demand power formula assumes that the total demand for 16 inches is +2.50.

In this formula, you will determine the standard power demand or dioptric demand for reading at a particular distance. The "f" will be the distance in meters. For example, a patient who uses intermediate at a distance of 60 centimeters would input an "f" value of .60m. In this case, the power demand at this distance is 1.67.



The Diopter Demand Formula (continued)

Step Two:

Calculate the difference in demand power

$$+2.50 - 1.67 = 0.83$$

(0.83 is the difference in demand power)

Step Three:

Calculate the resulting Intermediate ADD power:

$$\begin{aligned} &(\text{Near ADD Power}) - (\text{Difference in Demand Power}) \\ &= \text{Intermediate ADD Power} \end{aligned}$$

Calculate the difference in demand power: the standard demand is +2.50 diopters at 40cm. This is important because the doctor will typically prescribe the ADD power (often based on age) to this distance of 40cm or about 16 inches. In order to calculate the difference in the demand power, subtract the result of the above formula from the standard of +2.50 total accommodation.

$$+2.50 - 1.67 = .83 \quad (.83 \text{ is the difference in demand power})$$

At the distance used above of 60cm, this difference is .83. This means that in order to find the power for the distance of 60cm, we must subtract this amount from the total add power which is prescribed to this patient.

Calculate the resulting intermediate ADD power: For this calculation, simply take the prescribed near ADD power and subtract the difference in demand power.

$$\text{Near ADD Power} - \text{Difference in Demand Power} = \text{Intermediate ADD Power}$$



Example Calculations Using the Formula

1. Determine the diopter difference:

- Near task at 40 cm requires +2.50 D (standard).
- Intermediate task at 60 cm requires +1.67 D.
- Difference: $+2.50 - +1.67 = +0.83$ D.

2. Adjust the ADD Power for this distance:

- If the prescribed ADD power is +1.50 D for 40 cm, then for 60 cm,
Prescribed ADD Power - Difference = Adjusted ADD Power
- Example: $+1.50 - +0.83 = +0.67$ D (This can be rounded to +0.75 D).

3. Use the resulting ADD power to create single vision intermediate lenses for this distance

- Add +0.75 to the distance prescription

Let's calculate the ADD power for a person in their mid-40s who needs glasses for computer work at an intermediate distance of 60 cm.

1. Age-based ADD power: Mid-40s typically require +1.00 to +1.50 D for standard near tasks at 40 cm. For this example, we will assume that the doctor prescribed a +1.50 for the ADD power at 16 inches or about 40 cm.
2. Adjust for intermediate distance: The power needed for 60 cm is 1.67 based on the formula $D=1/f$ where "f" is the focal length of 60 cm or .60m

Since the age-based ADD power for 40 cm has been prescribed for this patient at +1.50, we will continue calculations for adjustment based upon this.

The key steps to adjust are as follows:

1. Determine the diopter difference
2. Adjust the add power for the distance using the difference
3. Add the adjusted ADD power to the distance RX

Creating Custom Eyewear Options

You now have the ability to craft custom eyewear options
for your patient's specific needs



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Now that you understand the calculations, there are many custom pairs of eyewear that you can make for nearly any task. Musicians, speakers, and hobbyists may all have very specific distances that they need to work at. Understanding the exact distance where they work is the first step. This process begins by uncovering the patients' lifestyle, interests, and hobbies to ensure that you are fitting them with eyewear that will fully benefit them.

Once you have mastered fitting custom single vision eyewear, there are many other options which could also serve your patients in their hobby or daily work. For example, an older person who has lost most of their accommodative ability, could also benefit from adding their remaining add power to the bottom segment of a multifocal for their computer or hobby eyewear.

For example, if the patient had a prescribed ADD power of +2.50, and an adjusted intermediate power of +1.50, then this patient has a remaining add power of +1.00 which could be added to a bottom segment to aid in tasks at 40 cm or 16 inches.

Computer Progressives

Provide near at the bottom and computer or room distance at the top.

► Benefits:

- Aesthetics
- Wide Intermediate
- Large near zone

Just as you could put near at the bottom of a lined bifocal and intermediate at the top, you could also create something similar in a no-line design. These are often called computer lenses or office lenses. They come in multiple designs to match the needs of your patient.

They can have near at the bottom and computer at the top, near at the bottom and room distance at the top, or computer at the bottom and room distance at the top. Since these lenses do not progress the full spectrum from near to infinity, the designs are able to accomplish a much wider channel through the progression with less peripheral blur.

Computer Progressives

- ▶ Hoya iD Space™, iD Screen™, and iD Zoom™
- ▶ Shamir Workspace™ series
- ▶ Zeiss Office™ lenses
- ▶ Essilor Ideal Computer™

Most lens manufacturers offer varying designs of computer progressives with many similarities in designs. These manufacturers each offer different computer lens designs within their portfolio.

To fit a computer progressive, first determine the most important distances that the patient needs. Next, select a lens design that offers these distances. Then fit the lens in a similar manner to measuring a progressive.

Single Vision Boost Lenses

- ▶ Eyezen™
- ▶ Hoya Sync III™
- ▶ Zeiss SmartLife™
- ▶ Shamir Relax™

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Single vision boost lenses are designed to relieve eye strain at near focus. The demands of today's digital devices can cause eye strain for all ages. These lens designs incorporate the benefits of a single vision lens with a minor dynamic ADD power at the bottom.

The dynamic ranges for the designs span from about +0.50 up to +1.32. These are beneficial to digital device users as young as adolescents and strong enough for early presbyopic patients.

Using the skills you have learned combined with technology from lens designers, you can become a trusted source of custom eyewear to your patients. You can now serve them with golf glasses, spa glasses, computer glasses, or gaming glasses. The possibilities are endless!