

Pursuing 20/20 at 40+

by Margie Patlak

Although few of them care to admit to it, baby boomers are getting older. Seventy-six million post-war infants are heading into their 40s, where they will encounter not only gray hair and wrinkles, but also another sign of aging—blurred vision when doing close work, such as reading.

This particular vision impairment goes by the name presbyopia. Most people first notice signs of presbyopia when they are in their 40s, and virtually everyone older than 50 has the condition. It gets its start, however, at about age 10 when the eyeball stops growing. Because the eye's lens still continues to churn out new cells after this age, its cells become so crowded together that the lens gradually loses its flexibility. Consequently, the eye's muscles cannot bend or focus the lens for the sharp, clear vision needed for near objects. A person who is farsighted may experience the symptoms of presbyopia earlier than average, whereas nearsightedness can sometimes delay the condition by a few years.

The most common sign of presbyopia is blurred vision at a normal reading distance, with a tendency to hold reading materials further away in order to see them better. Eye fatigue and headaches commonly result from doing close work. Sometimes a person with the beginnings of presbyopia finds that he or she can read without blurriness in the morning, but has hampered close vision by the end of the day. This "now you see it, now you don't" phenomenon occurs because eye muscles are fatigued from trying to focus the eye lens throughout the day for close vision, so that by evening the muscles don't have the strength to focus the eye sufficiently for near sight.

Conditions other than presbyopia, such as farsightedness and cataracts, can also

cause blurred vision close up, however. Only a thorough eye exam by an optometrist or ophthalmologist testing the eye's ability to change focus can determine which eye condition is causing the problem.

Research has not yet provided us with any clues to preventing presbyopia. But the wide range of bifocal, trifocal, reading, and progressive addition eyeglasses, as well as specialized contact lenses now available, can provide crisp near vision to people who lack it. All of these are regulated by the Food and Drug Administration.

Reading Glasses

First used in the late 13th century by middle-aged scholars, reading glasses improve near vision only. Since they tend to blur objects in the distance, reading glasses can be worn only for close work.

Dr. Richard E. Lippman, O.D., director of FDA's division of ophthalmic devices, describes the experience of using reading glasses. If you're working at a desk, he says, "and someone comes into the room, you're going to have to take your reading glasses off in order to see him clearly." A person with nearsightedness or other vision problems must alternate using reading glasses for close work with other eyeglasses or contact lenses for distance vision.

Reading glasses may be inconvenient when shopping or doing anything requiring good vision at more than one seeing distance. Reading glasses in a half-frame can sometimes relieve that inconvenience for people who have no vision problems besides presbyopia. These eyeglasses are particularly useful when doing office work, cooking, or pursuing such hobbies as playing cards or knitting.

The continual putting on and taking off of reading glasses calls for sturdy frames. A typical pair of prescription reading glasses costs anywhere from \$20 to \$200, depending on the type of frame purchased and where it is bought.

Although nonprescription reading glasses are available for less than \$15 a pair, these mass-produced eyeglasses may not accurately correct vision. While the correction of both lenses often is the same in these glasses, almost everyone needs a different lens prescription for each eye. These commercial reading glasses also can cause headaches, tired eyes, and other symptoms of eyestrain because the wearer's line of sight may not coincide with the optical center of the lenses.

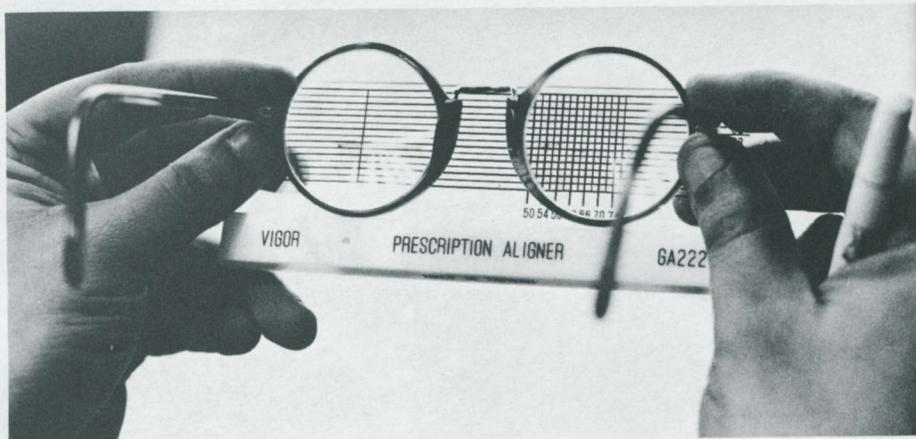
Bifocals

Many older adults wear bifocals or trifocals because they need different lens prescriptions to see clearly at different distances, and find it inconvenient to continually switch between reading glasses and their regular glasses. Some people who have presbyopia but who also have normal distance vision may also wear bifocals with a nonprescription (technically called "plano") segment on top to avoid the inconvenience of taking off reading glasses to see something far off.

Generally, an upper portion of a bifocal lens is used for seeing far distances and the lower portion for seeing near. To read, a person looks down through the lower portion.

Bifocals come in a variety of types to meet specific vision needs. A person who works at a large desk, for example, and needs to see things near over a wide range often opts for bifocals in which the entire bottom half of the lens can be used

Optician lines up bifocal correction in lenses with lines on "prescription aligner" to make sure lenses are positioned properly.



for near vision. A casual reader, however, can get by with a near vision segment that is a small circle or half-sphere at the bottom of the lens. Electricians, in contrast, who work close overhead when connecting wires, may need bifocals that have the prescription for near vision in the upper portion of the lens.

Bifocals are about \$25 to \$50 more expensive than reading glasses, and most people take more time adjusting to them since they must learn how to use eye and head movements in order to take best advantage of the lenses. For example, it's best to gaze downward with the eyes when reading, and tilt the head down when walking down a flight of stairs.

According to Lippman, some wearers adjust to bifocals after wearing them for just a few minutes, but other people never feel comfortable with them. He feels success with bifocals depends on motivation and need. "If a patient feels that bifocals make him look old and consequently is opposed to wearing them, for example, he'll have a hard time adjusting," he says. A person who must see both near and far objects, however, will often adjust rapidly to bifocals, he adds, because they relieve the inconvenience of continually switching from one set of glasses to another.

Trifocals

Generally, presbyopia worsens with age. People older than 50 often find that though they can see well close up with the bottom part of their bifocals and can see objects clearly in the distance with the top part, there's a range of vision between 16 and 24 inches that becomes blurry. Clear vision at that range may be critical when using a computer, for example, or playing cards.

If bifocals don't meet all vision needs, trifocals may be the answer. These

glasses have a bottom portion of the lens for near viewing, a top portion for far viewing, and a middle section with power in between the other two segments so that the wearer can see things clearly at a mid-distance range. Because three different prescriptions are crammed into one lens, however, the field of vision for each distance is limited. This makes it more difficult to adjust to trifocals than bifocals. They are also more expensive than conventional bifocals.

Progressive Addition Lenses

Bifocals and trifocals wearers who are bothered by the telltale lines on these glasses may want to consider getting what are known as progressive addition lenses. These eyeglasses give a gradual invisible change in lens power from the top of the lens to the bottom. To get clear vision from far to near distance, you move your eyes up or down.

Progressive addition lenses cost about \$25 to \$50 more than bifocals, and adjustment to them is more difficult. The main problem these lenses pose is distortion in the peripheral areas of the lenses. If wearers have to look through the edges of their lenses in order to see someone beside them, for example, the person may appear blurred. The amount of blurring experienced can be limited, however, by turning the head rather than the eyes to look at something not directly in front.

The distortion on the periphery of progressive addition lenses may also be spatially disorienting. "People who use these glasses for the first time may feel they are moving up or down hill when in fact they are on level ground," says Lippman. The distortion on the sides may increase the more complex the prescription is for other vision problems besides presbyopia, such as astigmatism or

nearsightedness. Lippman recommends that only properly motivated people who understand the limitations of these lenses consider using them as an alternative to conventional bifocals or trifocals.

Contact Lenses

Those who prefer contact lenses to glasses may not have to give them up when presbyopia strikes. Many people find they can continue to wear their regular contacts for distance vision and put on reading glasses for close work. Because the prescription for these glasses is determined, in part, by the prescription for the contact lenses, the reading glasses alone cannot provide good close vision.

Hard, gas-permeable, and soft contact lenses are all available with bifocal corrections. Bifocal contacts come in a variety of designs. Working with an eye-care professional, consumers can decide which option will work best for them based on individual vision needs, eye shape, and other factors.

It is harder to adjust to multifocal contact lenses than to multifocal eyeglasses. Fewer than one 1 of 3 people using bifocal contacts, for example, is able to adjust to them, whereas most people can adjust to bifocal eyeglasses. Because of this difficulty, most practitioners usually recommend bifocal contacts only to people who have successfully worn contacts in the past.

Multifocal contacts can be double or triple the price of multifocal eyeglasses. A much less costly contact lens alternative is to fit one eye with a contact lens for near vision and, if needed, the other eye with a lens for distance vision. Contacts worn in this way are referred to as "monovision" lenses. They cost about the same as regular contacts and are easier to replace or change. However, contacts worn in this manner may hamper



Adjustment Tips

To get the best results with your bifocal or trifocal eyeglasses, let your eye doctor know all the various tasks you do both on and off the job that require clear vision. This information will help in the correct placement of the various lens prescriptions. Improperly placed lens segments can make seeing difficult and cause accidents, particularly when walking, using stairs, or driving.

The American Optometric Association offers these suggestions to new bifocal and trifocal wearers:

- Don't look at your feet when walking.
- Hold reading material closer to your body and lower your eyes, not your head, so that you are reading out of the lowest part of the lens.
- Fold the newspaper in half or quarters and move it, rather than your head, to read comfortably.
- Wear the lenses continuously for the first week or two, until you are accustomed to them, even though you may not need them for all tasks.
- Make sure that eyeglass frames are always adjusted for your face so that the lenses are properly positioned.■

depth perception and peripheral vision. "I wouldn't want to fly a plane with them," Lippman says. Monovision contact lenses work more successfully in people whose normal vision lacks fusion—that is, their eyes do not work together properly.

The greater difference there is between the prescriptions for far and near vision, the harder it is to adjust to this manner of wearing contact lenses. "In people with early stages of presbyopia, the difference is not that great, but as you get older, monovision contacts are less of an option," Lippman says.

New on the market are "diffractive" contact lenses. The surface of these lenses has invisible ridges molded into concentric circles. The space between the circles gets smaller as the distance increases from the center of the lens, which is used for distance vision. The ridges bend light in such a way that the wearer is able to see things both close and far alternately. Consequently, a person using diffractive contacts doesn't have a narrowed area on the lens in which to look to see far or near, as with bifocal lenses. Wearers must learn to adjust to diffractive contacts, however, and since they are relatively new, it's too early to tell how successful these contact lenses will be. They are more expensive than bifocal contacts.

Whether opting for reading glasses, multifocal lenses, or contacts, wearers usually need new ones every 12 to 18 months to correct for worsening presbyopia. "It doesn't pay to get old," says Lippman. "My advice is to stay young."■

Margie Patlak is a free-lance writer in Portland, Ore.