

# Progressives Progress

Have you noticed that it is bit harder reading the phone book lately? Do your arms seem “too short” when you are flipping through the newspaper? You're not alone. This condition is referred to as presbyopia, an unavoidable limitation to your vision that occurs as the eyes age and hinders your ability to focus on near objects.

Presbyopia is a natural part of life that occurs in virtually everyone. In fact, it currently affects about 100 million Americans. Some people start noticing symptoms around age 40, while others may not notice anything until much later.

If you become presbyopic, don't despair, there are many choices to improve your vision, including eyeglasses, contact lenses and surgery. Although alternate technologies are improving, progressive spectacle lenses are by far the most popular choice.

## Progressive Lenses 101

Progressives got their name because the corrective powers change progressively throughout the lens. A wearer looks through the top of the lens for distance vision, the middle for intermediate vision, and the bottom for reading or close work. Each area is blended invisibly into the next, without the lines of traditional bifocals or trifocals that cause “image jump” as the eyes move to different focal powers.

The best vision through progressives occurs when looking directly forward at the object of focus. There is a "corridor" that runs vertically down each lens where your vision is optimized. In order to achieve the progression from one area of focus to the next a great number of curves are manufactured into the lens. These curves are graduated vertically in the center and brought out to the sides of the lenses to be "blended" together. Although most of that blended area is eliminated when the lenses are cut down to fit the eyeglass frame, there is still some distortion at the edge of the lens.

## Choosing the Best Progressive for You

There are many different progressive lenses on the market today, and choosing the right pair can be confusing. My advice is to do some research and then find an experienced, preferably licensed, optician who can explain the pros and cons of each lens to you. The three main factors when choosing progressives are progressive design, lens material and enhancements.

## **Design**

The main technological advances involve widening the corridor of optimal vision. Newer lenses have a wider corridor for intermediate and near correction. In the last year advanced lenses offered by technology leaders such as Hoya and Varilux have reduced edge distortion and improved field of vision by using sophisticated techniques to surfaces both sides of the lens. An example of this technology is the Hoyalux iD. The manufacturer states that it provides balanced correction at all distances and in all directions by utilizing both sides of the lens.

Until recently, another disadvantage of the progressive corridor was that an eyeglass frame had to be relatively large in order to accommodate all of the areas of focus. If the patient chose a frame that was small, the reading portion would end up cut off. Now, lens manufacturers offer progressives that are more compact to fit into fashionable smaller frames. Smaller lenses mean a smaller corridor, so these lenses are not for everyone.

## **Material**

For decades glass was the only material option, but it was heavy and shattered easily. Then CR39 plastic came along with reduced weight and increased the durability compared to glass. Next came polycarbonate, a lightweight and thinner lens that was used in the astronauts' face shields. Recently High Index and Trivex have entered the market. High index is a very thin and relatively flat lens that is a great way to improve on thick lenses that magnify or minify your eyes. Trivex is the newest material on the market. It is a mid-index lens that is lighter and more durable than plastic with improved optics. In the last few months Trivex was approved for use as safety lenses. Hoya claims that its Phoenix brand Trivex lens is six times stronger and twice as scratch resistant as plastic.

## **Enhancements**

The most common enhancement is anti-reflective, or AR. Much like progressives, AR technology has exploded over the last few years. AR is worth considering because it reduces glare that causes eye strain. Glare can be found in headlights, fluorescent lights, computer screens, snow and even your lens material. AR also allows others to see your eyes instead of a reflection off of your lenses. Many new AR offerings have scratch resistance and repel liquids and static; these properties reduce lens scratching and wear while keeping lenses cleaner.

Another enhancement is sunwear. Transitions brand photochromic lenses are clear lenses that automatically darken in bright UV light. Transitions lenses are great for people who move from indoors to outdoors and don't want separate sunglasses. Car windshields block UV light, so Transitions are not a good choice for driving. If you prefer darker sunglasses that are good for driving or outdoor activities, try polarized lenses. These sunglasses block harmful UV light and reduce glare from sunlight.

### **Adaptation to Progressive Lenses**

There is a short adaptation period when you are fitted with progressive lenses that can range from a few minutes to several days. Newer progressives are easier to adapt to than older designs. Your optician should sit down and review adaptation strategies with you. Eye care professionals realize that a few people cannot adapt to progressives, so most have a fair non-adapt policy.

### **Final Thoughts**

In the last few years optical lens manufacturers have come out with many great new technologies. To get the most from these advancements you should match your budget, lifestyle and prescription to the right combination of progressive design, lens material and enhancements. There is no best overall choice, but a good eye care practitioner can help you find the best choice for you.

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