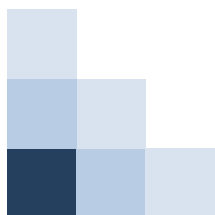
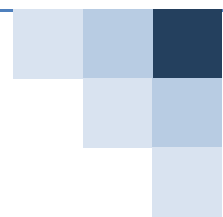


# Varilux Student Grant

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Graham Räsänen  
7480 NW 10<sup>th</sup> Place  
Plantation, FL 33313  
954-584-4451  
[rasanen@nova.edu](mailto:rasanen@nova.edu)



## INTRODUCTION

The purpose of this case is to illustrate the importance of good patient communication and the right ophthalmic selection to meet his or her needs. Below is the full report of one man's visit to our clinic, the initial conversation that led to the selection of the Varilux Physio 360, the reasons why such a design was appropriate for him, and the subsequent impact it had on his life.

## PATIENT CASE PRESENTATION

MR, a 49-year-old Hispanic male, presented to our clinic with a chief complaint of blurry vision out of both eyes. While the blurriness was worsened by stress and hunger, MR was plagued by the symptom constantly. He recognized that the condition first began roughly 4 years ago, and has since found nothing to remedy the situation. Occasionally, headaches would accompany periods of visual discomfort.

MR presented to us with multiple pairs of glasses. In the four-year period prior to visiting us, he had visited various offices and ophthalmologists, obtaining four pairs of glasses and yet no prescription which adequately met his visual needs. Out of the pairs he showed us, he felt the following was the best:

	Sphere	Cylinder	Axis	Add
OD	-8.00	-1.00	160	+2.50
OS	-7.75	-0.75	165	+2.50

Much to my surprise, with the above correction, MR read half of the 20/20 line on the acuity chart accurately in both eyes individually. So how, then, could it be that MR suffered from blur? Probing further, he revealed that he had used progressive lenses for a couple of years. He did not suffer from any swimming motions or jumping images through his lenses. He did, however, speak of his life-long struggle with a high prescription. For the years prior to the onset of presbyopia, he had no difficulty at all with his glasses. It was only when he finally felt the need for near correction that all his troubles began. Having been well educated by previous eye-care providers, he was aware of the importance of maintaining proper alignment and vertex distance so that his lenses would not change in effective power. He also was very diligent about cleaning his lenses, and always made it a point to have an anti-reflective coating on them. Even so, presbyopic corrections only seemed to cause him great trouble. He wanted something that would give him vision on par to the quality he enjoyed when he was younger, so that using the computer, reading the newspaper, and driving at night would all feel natural and comfortable again.

Throughout the remainder of the examination, it was apparent that MR did not suffer from any concurrent systemic diseases, active ocular disease, or ongoing allergic conditions that might have contributed to his chief complaint. The refraction, too, did not vary that greatly from the current Rx he listed above. He was also able to read 20/20 with it in each eye. To be sure, these were the final subjective findings:

	<b>Sphere</b>	<b>Cylinder</b>	<b>Axis</b>	<b>Add</b>
<b>OD</b>	-8.00	-0.75	180	+2.25
<b>OS</b>	-7.75	-0.50	162	+2.25

Since it was evident that MR had every reason to be seeing as clear as possible, the initial question came back to haunt me: Why was MR suffering from blur? As I began to reflect on this puzzle, the answer hit me—the lenses! As I started to ask MR what brand or progressive designs he had been using, a puzzled look came over him. Apparently, in all his visits to different eye care providers, not one person had ever discussed with him that there were different types of progressives; he thought there was only one! Thus, I took this opportunity to bring MR back to our optical and educate him all about the latest progressive technologies.

When I inspected his lenses closely, I found that they were Varilux Comfort brand lenses. These lenses have been out on the market for well over 10 years now, and have been the gold standard for a flexible design that meets the needs of first-time and long-time progressive wearers alike. These lenses, however, do not correct for things called higher-order aberrations. These are complex visual errors that are induced when a wave-front of light passes through the eye and distorts when it touches the tears, cornea, lens, and the fluids in the eye. What many people refer to as near-sightedness (myopia) and far-sightedness (hyperopia) are really just disguised low-order aberrations, which in simple terms means a defocused image. However, higher-order aberrations come in flavors like coma, trefoil, and spherical aberrations. Coma refers to the blur that happens when light rays come into a lens from the sides, instead of straight on. The result is a comet-like blur the farther they move away from the middle. Spherical aberration is just as it sounds; a warping or distorting of an image as it passes through a lens because not all the light rays focus at the same point. The reason we are concerned about these things is because they are to blame for the double vision, blur, halos, night trouble, and contrast trouble that so many people suffer from. Such distortions like these were for years impossible to correct, thus they were ignored. But not anymore!

A new brand of research, called wave-front technology, started to look for ways to eliminate these nasty distortions. In 2005, Essilor introduced their very-own wavefront-correcting lenses in the form of the Varilux Physio. The Physio is special because of two major strengths: it achieves higher visual acuity compared to conventional designs and up to 30% sharper contrast sensitivity, too. These lenses additionally deliver clear, crisp vision in all circumstances, such as reading a newspaper or driving at night. Best of all, they have a smoother progression to the near portion of the lens, reducing much of the swimming, distorted images some have difficulty adapting to in progressive lenses. Other advantages of the Physio design include wider corridors, affording an even larger intermediate portion for ease of computer use and a more natural reading distance. The design also redirects residual astigmatism in such a way that patients won't

even notice it's there. Everything described above is part of the standard Physio. But more recently, the Physio 360 has become available. This lens has not one but two digitally surfaced sides, affording wavefront correction on both the front surface and back surface, enhancing the clarity even further.

It was clear to me that MR's blurry vision wasn't an issue of seeing the 20/20 line--it was the subjective quality of the vision he was getting through his lenses. Above all else, his strong prescription was making these visual distortions much more apparent than in the average patient. After explaining all the benefits of the superior Physio 360 progressive, he was very excited to give them a try.

Not to be overlooked was another great benefit to the Physio design is that it comes with the brand-new Crizal Avancé with Scotchgard Protector, a state-of-the-art high surface density anti-reflective technology which is integrated into the lens. It bestows an unprecedented hydrophobic coating that resists wear after nearly 20,000 cleanings, and even has the highest topcoat durability and scratch resistance of any lens to date. The lenses repel fingerprints, static, and water as well as cuts glare in such a way that it makes the lenses appear clear, it's as if they weren't there! This was particularly appealing to MR, since his current glasses were often smudged and required continuous cleaning. Spectacle prescriptions typically suffer in appearance from internal reflections caused by the nature of a high minus lens. The anti-reflective coating further affords maximum comfort when using computer screens and while driving at night, effectively erasing the halos from oncoming traffic.

MR provided a full metal frame with which to fit lenses, and this frame was still in great shape because he had purchased it with his last prescription. After viewing him at eye level to prevent parallax errors, I dotted the center of his pupils in order to take a fitting center height measurement. Sure enough, the frames allowed more than enough room for the full progressive add. Next, to provide him maximum comfort, I discussed lens material options which would help lighten the weight and reduce the thickness of the glasses. Although plain plastic materials like CR39 would have given him greater optical quality, polycarbonate was considered for its impact resistance and extreme light weight. Additionally, a high index plastic lens would allow the benefits of optical quality with the bonus of greater thickness reduction, but at the cost of losing impact resistance. Ultimately, the 1.67 high index version of the Physio 360 was selected because of the patient's chief concern for optical quality and lens thinness.

Even though MR was an established progressive wearer, I still took time to make sure he was aware of the proper way to view through his progressive lenses. I explained how viewing straight ahead naturally would allow him to see through the distance portion, whereas to see at near he would have to tilt his chin up slightly and drop his eyes. I also reminded him that if he were to encounter stairs he would have to drop his chin to ensure he views through the distance portion of the lens. Finally, I emphasized that it would be important to ensure the frames fit snugly when dispensed so that the lenses would not slide away from his face, or it would change the power or prescription needed to see sharply.

Unfortunately, due to clinic responsibilities I was unable to see MR at the time of dispensing. I had it in mind, though, to find out if the design we selected had finally solved his problems. I

would have never been able to guess what followed. Before I had a chance to call him after one week, I discovered that a letter had been delivered to our clinic. To my great pleasure, MR had taken the initiative—not even waiting for seven days to pass—to let me know how satisfied he was! Allow me to share what he had to say:

“The purpose of this letter is to genuinely express my deepest gratitude for restoring my vision. I have struggled and suffered through the last four years of my life with very blurry vision, visiting numerous eye doctors and changing my prescription glasses with absolutely no improvement to my vision. After your examination, evaluation, and the new prescription that you provided for me, I had my glasses made for me with the ‘Physio 360’ that you recommended and I am now, finally, after four very long years seeing at least 90% better. I cannot tell you what this means for me and what a positive impact it has had on my life. Continue to recommend the ‘Physio 360’ to all of your patients that have vision as poor as mine, as with these Physio 360 lenses the images are so very much clearer and every little bit of improvement in vision is invaluable. Good luck with your studies and be encouraged that you will continue to positively impact the lives of many patients. It would be wonderful for me to receive your business card once you finish your studies and open your practice.”

## CONCLUSION

Essilor brand Varilux Physio 360 lenses, with its dual-sided Wavefront technology and cutting edge Crizal Avancé with Scotchgard, provides maximal clarity and contrast superior to any lens on the market today. It resists dusts, scratches, and oils, affords spacious areas of intermediate and near vision, and cuts glare like no other. In a high-index plastic material, it affords both reduced weight and thickness with superior optical quality.

But it does more than these things—it changes lives. This lens provided a patient with the comfort and quality he had spent years searching for. It taught me as a student the importance of keeping abreast with the latest technical designs and to share these options with every patient. Not only did this lens indelibly impact both of our lives, but most importantly, it has paved the way for a lasting doctor-patient relationship.

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