Prescribing Bioptic Telescopes for Driving

Note that hands-on materials to practice are available for appr. 25 persons, others are welcome to watch.

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Greene

Dr. Peli's principal research interests are image processing in relation to visual function and clinical psychophysics in low vision rehabilitation with special emphasis on mobility and driving, image understanding and evaluation of display-vision interaction. He also maintains an interest in oculomotor control and binocular vision. Dr. Peli is a consultant to many companies in the ophthalmic instrumentation area and to manufacturers of head mounted displays (HMD). He served as a consultant on many national committees, including the National Institutes of Health, NASA AOS, Aviation Operations Systems advisory committee, US Air Force, Department of Veterans Affairs, US Navy Postdoctoral Fellowships Program, US Army Research Labs, and US Department of Transportation, Federal Motor Carrier Safety Administration. For 33 years he has been providing vision rehabilitation services at Tufts Medical Center in Boston.

Dr. Greene, cofounder and President of Ocutech is a graduate of the Pennsylvania College of Optometry, Philadelphia. Pennsylvania. After graduation he worked New York City at the Industrial Home for the Blind Low Vision Service under George Hellinger, OD. , and subsequently at The Blind Association of Western New York in Buffalo. After moving to North Carolina in 1980 he founded Academy Eye Associates, cofounded Ocutech, and joined the faculty of the Department of Ophthalmology at the University of North Carolina where he rose to full professor. At Ocutech, Dr. Greene has been the principal investigator on NIH funded grants to develop improved telescopic low vision aids including the VES-Autofocus system and has received numerous awards for his work. Dr. Greene has published in peer-reviewed journals and texts and presents lectures and courses nationally and internationally on managing the needs of the visually impaired. In 2008 he received the William Feinbloom Career Achievement Award from the American Academy of Optometry for his work in visual impairment.

Workshop outline

Visual impairment impacts a range of activities that reduce quality of life of individuals-- high amongst these being independent travel. In a 2009 survey study, 50% of visually impaired subjects sought the ability to drive. The Netherlands in the EU, Quebec province in Canada, and 43 of 50 states in the USA permit visually impaired individuals to drive with the aid of a bioptic telescope. The types of bioptics allowed and driver licensure restrictions vary between jurisdictions. As of Jan 2017, a bioptic use code will be added to European driving licenses and will be recognized in all countries. A growing body of research demonstrates the efficacy, safety and benefit of bioptic telescopes for driving. This workshop will review the background of bioptic fitting for driving in a lecture and will provide hands on experience in fitting and instructing patients in the use of bioptics in driving. The lecture will cover social, legal and technical aspects of driving with bioptics; the risks associated with driving with impaired vision, the legal requirements for bioptic driving, and the roles of low vision specialists, occupational therapists and certified driving instructors in fitting and training bioptic driving. Technical aspects to be covered include the optics of bioptics, the impact of bioptics on visual fields and their effects on driving performance, the utility of bioptics in driving and the impact of age, type of visual disorder, and previous driving experience upon outcomes. The lecture will also introduce the clinical methods for bioptic prescribing and fitting, and training methods for the use of the bioptic in driving. Dr. Henry Greene will facilitate the workshop together with Dr. Eli Peli.

Timetable

40 min Lecture

Introduction to bioptic optics, social, legal issues in low vision driving and bioptic fitting

5 min Introduction to activities

40 min Do-it-yourself, accommodating 25 persons

Fitting various telescopes to each other

5 min Discussion & wrap-up

Disclosures:

Dr. Peli has a patent for an in-the-lens bioptic telescope.

Dr. Green is the President, Ocutech Inc., a manufacturer of bioptic telescope.