Driving with a Visual Impairment

Bioptic Driving in Arizona

Arizona will soon to be the 39th state to grant a driver's license to some visually impaired people when they drive using a bioptic telescope. The Medical Advisory Board of ADOT recently agreed to a Motor Vehicle Rule change that would allow visually impaired persons a driver's license if they pass the current driving visual acuity requirements using no more than a 4X bioptic telescope. They must also pass the standard driving test with an ADOT driving instructor. The driver must demonstrate that they can perform all regular driving tasks such as speed control, merging, driving in traffic and effective use of mirrors. It is expected that this rule change will take place in January 2006.

The ability to drive is a privilege that many of us take for granted. Driving affects our quality of life and is a means to exercise freedom of mobility. The ability to drive gives people access to better jobs. It lets visually impaired parents share more fully in their children’s lives when they can attend school events. Driving also decreases the social isolation many visually impaired adults feel when they cannot leave their homes.

What are Bioptic Telescopes and how are they used for driving?

Bioptic telescopes are small telescopes which are mounted into ophthalmic corrective lenses, usually above the person’s line of sight. The bioptic telescope is a prescriptive device prescribed by either an optometrist or ophthalmologist specializing in low vision rehabilitation.

While driving, the driver looks through the corrective lenses 95% of the time. When extra magnification is needed to see signs and road conditions up ahead, the driver will lower his or her head to briefly look through the telescope (see photo).
The bioptic driver’s use of the telescope can be likened to the normally sighted driver’s use of rear and side mirrors. They are used as spotting tools for one or two seconds at a time. The telescopes can be focusable or non–focusable and can contain the person’s eyeglass prescription and/or tints. The telescopes are not focused while driving.

Candidates for Bioptic Driving

Persons with visual acuities of 20/200 or greater with stable ocular conditions are candidates for bioptic driving. The driver must have an eye condition that does not restrict the visual field. Persons with stable congenital ocular conditions such as albinism, nystagmus and aniridia are the best candidates. Some macular degeneration patients may be candidates for bioptic driving depending on the stability of their eye disease and their ability to use their eccentric vision.

Each candidate should be evaluated by their eye doctor to determine if they are a candidate for bioptic driving. Visual acuity is only one factor. The patients cognitive skills and ability to react quickly also need to be evaluated.

ViewFinder’s Bioptic Driving Program

The doctor’s at the ViewFinder Low Vision Resource Centers realize that a bioptic telescope alone does not make a person a safe driver. In anticipation of this ADOT rule change, we have established a comprehensive Bioptic Driver Training Program. Our doctors will evaluate the patient and determine if they are candidates for bioptic driving. Included in this testing is a **Useful Field of View Test**. This test measures visual attention and measures a subject’s ability to correctly identify central targets while simultaneously having to localize peripheral field targets, with and without the presence of distracting targets. For elderly drivers, there is a 50% correlation between poor results on this test and at-fault crash involvement.

Once fit with a telescope, our occupational therapists will train the patient to successfully use the telescope indoors and outdoors. Next the patient will have in-car training as a passenger, and lastly, in-car training as a driver. A Certified Driving Rehabilitation Specialist, will provide the in-car training. Once the training is complete, the patient is ready to take the road test with an ADOT driving tester. For more information regarding bioptic driving, please contact our office.

**Miscellaneous News:**

- The winner of the ViewFinder Teacher & Student Low Vision Aid Grant for the third quarter of 2005 was Christine Powers. Congratulations to Christine’s students. ViewFinder Teacher & Student Low Vision Aid Grants are distributed at the end of each quarter. Please request a grant at info@viewfinderlowvision.com