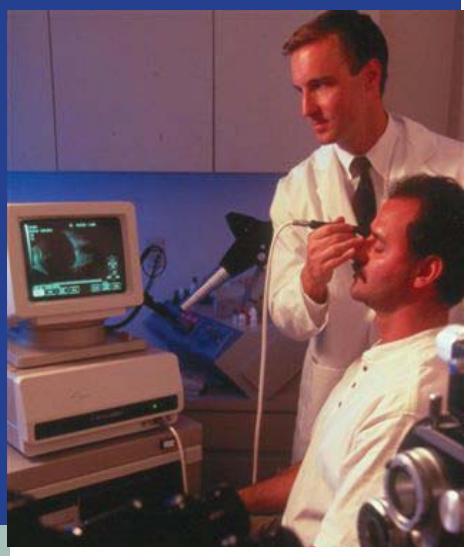
VA Research Advances

Low Vision



VA Research on vision loss includes developing a retinal prosthesis to restore vision to those suffering from macular degeneration and other common causes of blindness in veterans; developing behavioral strategies to help veterans cope with conditions of low vision and blindness; and conducting clinical trials of retinal prostheses. VA researchers are also focusing on areas to develop assistive devices for the visually impaired, and finding new methods of vision assessment.

Examples of VA research advances

- **Vision loss prominent among veterans**—There are some 10 million people who are blind or visually impaired in the United States. At least half are age 65 or older. Macular degeneration is the leading cause of vision loss among veterans and older adults. For those under 60, it is diabetic retinopathy. Other common causes are cataracts, glaucoma, and stroke.

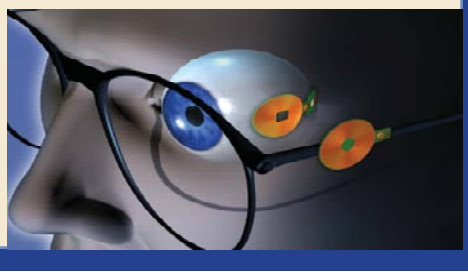
- **Traffic safety for low-vision pedestrians**—VA researchers in Atlanta are helping to test different models of pedestrian traffic signs—namely, Walk and Don't Walk— to determine which are the most visible for those with impaired vision.

- **GPS and rehabilitation**—A team at the Atlanta VA is exploring the use of the Global Positioning System, or GPS, and similar technologies to help measure the effectiveness of blind rehabilitation programs. With volunteers' consent, the researchers would use the technologies to provide quantifiable, objective data on the mobility of vision-impaired veterans who complete these programs.

Developing an Artificial Retina

VA investigators in Boston continue to make progress on the development of an artificial retina for those who have lost vision due to retinal damage. One recent publication reported that the threshold electrical current needed to stimulate the retina of a rabbit in which the device was implanted was very low. This was encouraging because using lower currents would reduce the chance of damage to surrounding eye tissue. Analogous approaches may prove useful in combat-related vision loss.

(Journal of Neural Engineering. 2005; 2(1):S48-S56)



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