



## Vision Loss

One of the most exciting areas of VA research in this field is the development of an artificial retina to restore vision to those affected by macular degeneration or retinitis pigmentosa. VA researchers are also working to improve or design new assistive devices for the visually impaired and to develop more accurate and efficient methods of vision assessment.

### *Examples of VA research advances*

- **Manmade protein could help eye problems**—Potentially blinding blood-vessel growth in the cornea, resulting from eye injury or even surgery, can be reduced by more than 50 percent with a new synthetically engineered protein, according to a recent animal study at the Augusta (Ga.) VA and the Medical College of Georgia. The researchers believe the protein may prove of use therapeutically in any condition where blood-vessel formation is detrimental, such as cancer, diabetic retinopathy, and macular degeneration.
- **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**—Researchers are exploring the use of the Global Positioning System and similar technologies to help measure the effectiveness of blind-rehabilitation programs. The goal is to track participants' mobility, with their consent.
- **Help for macular degeneration**—In a Chicago-based VA study, veterans with age-related macular degeneration who took the antioxidant lutein by itself or in combination with other nutrients showed major improvements in several symptoms. The study was the first to show that lutein could not only slow the progression of the disease but actually help reverse it. Lutein is a yellow pigment found in certain fruits and vegetables and in egg yolks and corn.

### Facts About Vision Loss

There are some 10 million people who are blind or visually impaired in the United States. At least half are age 65 or older. Age-related macular degeneration (ARMD) is the leading cause of vision loss among veterans and older adults. For those under 60, it is diabetic retinopathy. Macular degeneration involves impairments to the macula, a tiny area at the back of the eye that contains millions of light-sensing cells. In wet ARMD, which accounts for 90 percent of the blindness caused by the disease, blood and other fluids leak under the macula. Other common causes of vision loss among veterans include cataracts, glaucoma, and stroke.

