



DECADE OF VISION
an initiative of the **2010-2020**
Alliance For Eye And Vision Research

THE ALLIANCE FOR EYE AND VISION RESEARCH

In conjunction with:

**Research to Prevent Blindness
Blinded Veterans Association
Eye Bank Association of America
Association for Research in Vision and Ophthalmology**

*continues its series of educational briefings on exciting new
developments in eye and vision research*

*By inviting you to a Luncheon Briefing focusing
On Vital Defense-related Vision Research*

***Deployment-Related Vision Trauma Research:
Cornea Transplant Tissue Quality and Sight Restoration***

Tuesday, March 21, 2017

12 Noon - 1:15 pm

House Rayburn 2040 (formerly B-340)

Featuring Speaker

Mark A. Greiner, M.D. (University of Iowa Carver College of Medicine)

Please R.S.V.P. to

Taylor Beaumont @ 202-407-8320 or TaylorBeaumont1@gmail.com

**AEVR, a 501(c)3 Non-Profit Educational Foundation, is pleased to
host this widely attended event featuring an eye-healthy luncheon.**

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What are examples of deployment-related eye trauma and their impact?

Traumatic eye injury from penetrating wounds and Traumatic Brain Injury (TBI) ranks second only to hearing loss as the most common injury among active military:

- Traumatic eye injuries have accounted for upwards of 16 percent of all injuries in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF);
- Male soldiers aged 20-24 account for 97% of visual injuries;
- Eye-injured soldiers have only a 20 percent return-to-duty rate as compared to an 80 percent rate for other battle trauma injuries; and
- The Joint Department of Defense (DOD)/Department of Veterans Affairs (VA) Vision Center of Excellence (VCE) reports more than 197,000 OEF and OIF veterans with eye injuries since 2000, as well as that upwards of 75 percent of all TBI patients experience short- or long-term visual disorders (double vision, sensitivity to light, and inability to read print) and other cognitive impairments.

A 2012 National Alliance for Eye and Vision Research (NAEVR)-funded study that used only published data from 2000-2010 has estimated the cost to the United States of deployment-related eye injuries at \$25.1 billion, driven primarily by the present value of costs to the economy due to Social Security benefits, lost wages, and family care. Research to effectively treat acute eye damage can have long-term implications for an individual's vision health, productivity, and quality of life for the remainder of military service and into civilian life.

Since Fiscal Year (FY) 2009—when Congress first funded peer-reviewed vision research in DOD appropriations—the Vision Research Program (VRP) has awarded 74 grants for a total of \$63 million to researchers addressing penetrating eye injuries, corneal healing, retinal/corneal protection, TBI-related visual dysfunction, and the eye blast phenomenon.

What is the importance of corneal transplant research in vision restoration?

The cornea—the clear front window of the eye—is the key to focusing light and essential for clear vision. If the cornea becomes damaged or diseased, the vision becomes impaired, and the individual is impaired. Corneal researchers strive to develop methods that restore and protect corneal health for those with blinding eye diseases. Cornea transplant surgery is the principal treatment in restoring vision for those with corneal injuries and diseases. Approximately 50,000 corneal transplants are performed annually in the U.S. Of these, approximately 3-5 percent of transplants fail due to poor tissue quality and 10 percent are repeat surgeries for transplant failure. Currently, there are no measures that can indicate the health of cornea transplant tissue before surgery. To improve outcomes for military, veteran, and civilian patients in need of a cornea transplant, research is needed to identify individuals at the greatest risk for developing complications and poor outcomes after cornea transplantation, and to improve the quality of cornea transplant tissue.

Who will speak?

Mark A. Greiner, M.D. is an assistant Professor of Ophthalmology & Visual Sciences at the University of Iowa Carver College of Medicine. As a clinician-scientist, his practice specialty is Cornea, External Disease and Refractive Surgery. He is also a Medical Director and researcher at the Iowa Lions Eye Bank, and serves on the Board of Directors of the Eye Bank Association of America.

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