



By Carlla Jones, U.S. Army Center for Health Promotion and Preventive Medicine

The digital age has increased worker productivity and harnessed the power of networks and the Internet to make communication more efficient. However, 75 percent of the people who use a computer three or more hours a day will suffer from computer-related eyestrain, according to the National Institute of Occupational Safety and Health.

Some of the symptoms of computer eyestrain, also referred to as computer vision syndrome include:

- Headaches and neck or shoulder pain
- Blurred or double vision
- Changes in color perception
- Eyestrain, eye fatigue, or eye irritation

The elements of computer use that make this activity so visually demanding, as defined by the American Optometric Association, are frequent eye movements, continuous eye focusing, and alignment demands. These three processes are repetitive muscular activities caused by the nature of the computer-video display terminal.

The human eye is designed to focus on sharp edges. However, the pixels (points of light) that form the letters on the VDT are actually brighter at the center and

dimmer at the edges. When the eye cannot focus properly on a sharply defined edge, the eye attempts to focus elsewhere in search of that sharp edge. The continual focusing and refocusing of the eyes causes CVS, which could be considered a form of repetitive-stress fatigue. This eyestrain or fatigue is alleviated with rest.

The following tips can minimize the effects of CVS at home and at work:

- Make each computer workstation “eye-friendly.” Keep the VDT 18 to 30 inches away from the user. The VDT should also be four to nine inches below eye level. Use an adjustable, ergonomically-sound workstation. Clean the VDT screen frequently for dust and fingerprints.
- Minimize glare. Place the VDT perpendicular to windows and adjust drapes or blinds as necessary to eliminate glare and harsh reflections. Incandescent lighting is better than fluorescent.
- Take frequent breaks. NIOSH has reported that short, strategically-spaced rest breaks can reduce eyestrain for VDT users without decreasing productivity. Look away

from the VDT every 15 to 20 minutes. Focus on something far away. Repeat this eye relaxation three times; with eyes closed, rotate eyes to look up, then down, then left, then right. Short, frequent breaks of one to two-minutes-per hour are better than longer, less frequent breaks.

- Get regular eye exams. All VDT users should get regular eye exams. Be sure to inform the eye-care provider about work environment factors such as long periods of VDT use.
- Blink! Decreased frequency of blinking causes eyes to dry out and feel sore. Normally, people blink an average of 22 times-per-minute; computer users blink an average of seven times-per-minute.
- Increased use of computers at work and at home is inevitable. However, every computer user can take steps to avoid computer eyestrain without sacrificing productivity or efficiency. So, don’t forget to blink! ■

On the ‘Net

www.cdc.gov/niosh/restbrks.html
www.aoanet.org/ia-musculo.html



Cleaning Up the Mess

Story and photo by Mark Kane

On a hot early June Saturday morning, 34 people, District employees and family members, spent the day picking up bottles, cans, styrofoam, and other trash items as part of the District's involvement in the Adopt-a-Mississippi River Mile Program. The District has adopted Mississippi river miles 493-495.

The volunteers picked up more than 30 bags of trash at LeClaire Base, Ill., which included the area around Locks and Dam 14, Fisherman's Corner, and Smith's Island.

Justine Barati, Public Affairs, and Steve Vacek, Mississippi River Project, coordinated the cleanup.

"This cleanup was especially important considering the amount of debris left from the recent high water," said Barati.

"Everyone worked hard and did a great job," said Vacek. "As a result, others will have an enjoyable area to fish and sightsee."

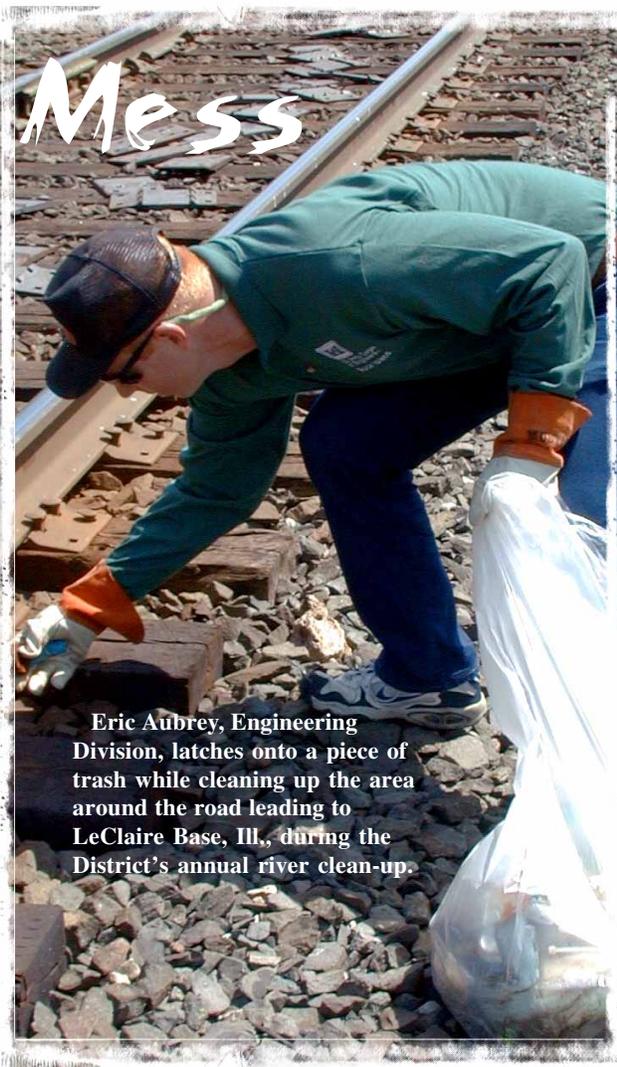
After a day of work, the participants devoted more than 102 volunteer hours to the cleanup. The hungry workers were treated to a picnic of hamburgers and hotdogs, provided by the Rock Island District Welfare Association.

The Adopt-a-Mississippi River Mile

Program is a major focus of the Mississippi River Beautification and Restoration Project this year. Schools, organizations, companies, and families have adopted one or more miles of shoreline since the program started in August 1999. There are no fees involved in adopting shoreline miles, only a voluntary commitment to stewardship. Chad Pregracke, coordinator, Mississippi River Beautification and Restoration Project, estimates that by the end of the project, more than 100 groups will be adopting Mississippi River miles.

The MRBRP was founded in 1997 with the objective of cleaning up the Mississippi River. In its first year, the project was responsible for cleaning more than 100 miles of shoreline and removing an estimated 45,000 tons of garbage from the river, the riverbanks and various islands. By the middle of 1999, those numbers grew to include 1,000 miles of Mississippi shoreline and an estimated 200 tons of debris.

An in-depth look at the Mississippi



Eric Aubrey, Engineering Division, latches onto a piece of trash while cleaning up the area around the road leading to LeClaire Base, Ill., during the District's annual river clean-up.

River Beautification and Restoration Project, including upcoming clean-up dates, can be viewed at:

www.cleanrivers.com



SAME, Rock Island Post Hits a Grand Slam

Story and photo by Mark Kane

SAME, Rock Island Post member, Frank Monfeli, Programs and Project Management, attaches a 2000 pin to the post's "Membership" streamer during the ceremony.

The Society of American Military Engineers, Rock Island Post, received the SAME Gold Medal distinguishing them as the organization's number one post for 2000.

The post was also awarded every available streamer (a grand slam) for the second consecutive year. The available streamers include: Communications, Distinguished Post, Distinguished Region, Education, Exceptional Youth Program, Membership, National Programs, Readiness, Sustainability, and Swimmer.

The Rock Island Post sustains a membership of more than 200 active members, many of which are Rock Island District employees.

SAME brings together military, federal government, and private practice engineers to improve the engineering capabilities of the nation and advance the knowledge of engineering technology and applications.

SAME is a nonprofit professional engineer association, headquartered in Alexandria, Va., with posts worldwide.

The organization was founded in 1920 and today maintains a membership of nearly 27,000 members from industry, military and government organizations.