

California AgrAbility Project

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*A partnership between the
University of California Farm
Safety Program (Cooperative
Extension) and Easter Seals
Superior California.*

Call Toll Free

1-800-477-6129

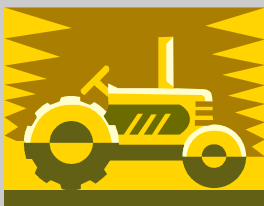
For Spanish call

1-888-877-3257, ext 117

or

916-679-3117

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Promoting Success in Agriculture for People with Disabilities and Their Families

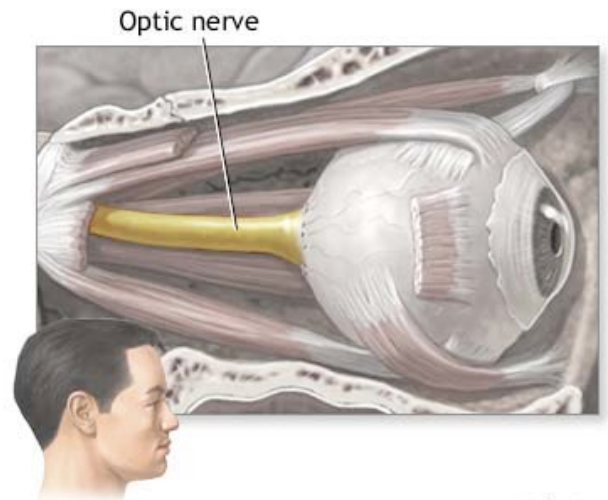
The Eyes Have It!

Dust, debris, allergens, chemicals, pokes with branches, ultraviolet light, wind...these are annoyances that any hardy farmer or worker tolerates everyday. However, when they are assaulting the eye, effects go beyond mere annoyances. Such exposures can lead to eye and corneal trauma, irritation, cataracts, and, even blindness.

Experts for CalAgrAbility say such injuries and illness are common in agriculture. Many California farmers and workers experience low vision or blindness, which affects 3.3 million in the US age 40 and older, according to the NIH National Eye Institute.

Injuries are preventable. And, even though eye illness and disease may not be preventable, such as macular degeneration and glaucoma, symptoms can be mitigated and successfully managed.

CalAgrAbility staff can assist farmers and workers with a wide range of support services and rehabilitation programs. Staff is available to help agricultural populations with low vision and other conditions to continue working and living safely.



ADAM.

Figure No. 1 Glaucoma causes pressure on the optic nerve.

What is Glaucoma?

Glaucoma is a disease of the optic nerve, which carries images to the brain. "Picture an electric cable with a bundle of wires, says Kierstan Boyd, Patient Education Director for American Academy of Ophthalmologists (AAO), the optic nerve is just like this, made up of many nerve fibers (Figure No. 1). If fibers are damaged, blind spots develop. Even though glaucoma is a leading cause of blindness in the US, loss of sight can often be prevented with early treatment."

Glaucoma is caused by pressure build up. Clear liquid (not part of the tear system) circulates inside the front of the eye. Healthy pressure depends on a balance of fluid being produced and an equal amount flowing out through a microscopic drainage system (not the tear system). "A blocked drainage area means increased pressure on the optic nerve which can result in loss of peripheral vision (Figure No. 2)," according to Ms. Boyd. "Unchecked this condition can lead to total blindness. But there are ways to manage the disease."



Figure No. 2: Normal Vision and Glaucoma Vision
(Source: healthnewsflash.com)

Article continued on page 2

Events

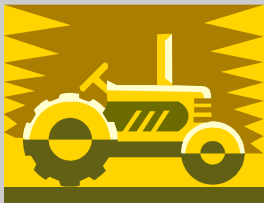
Upcoming Events

March 7-10, 2005
2005 Spring National Small Business Innovation Research (SBIR) Conference: Corps of Discovery Begins with SBIR: Grow Your Business with Public-Private Financing. See if your small business could benefit from part of the \$2+ billion available in government grants and contracts. Hilton Omaha-Omaha, NE. Visit the website: <http://www.SBIRworld.com/Omaha>

March 9-10, 2005 **Office of Migrant Services Department of Housing and Community Development Division of Community Affairs, Annual Migrant Center Managers Meeting.** Host Housing Authority, Kern County, at the Shafter Migrant Center, 17213 Central Valley Highway, Shafter. For information contact: arodrigu@hcd.ca.gov

March 14-19, 2005, 20th **International Conference on Technology & Persons with Disabilities** Los Angeles Airport Marriott & Hilton hotels. Host is Cal State Northridge and Center on Disabilities. For information visit: <http://www.csun.edu/cod/conf/index.htm>.

March 23-24, 2005 **California Agriculture Symposium**, Sec. of Food & Agriculture A.G. Kawamura is keynote speaker at this major agricultural summit at Hilton Hotel, Arden West Sacramento, California. For more information visit the website at: <http://groups.ucanr.org/calagsymposium/>



Managing Glaucoma

- 👁️ glaucoma often progresses with no symptoms or warning signs
- 👁️ the best defense to preventing vision loss from glaucoma is early diagnosis and regular eye exams with an ophthalmologist or optometrist
- 👁️ glaucoma cannot be cured but treatment can control it
- 👁️ newly diagnosed glaucoma is most often treated with medication.
- 👁️ new research shows laser surgery is a safe and effective alternative to medication (Source: AAO)

Glaucoma Awareness

According to the American Academy of Ophthalmology, nearly three million people have glaucoma, but half do not realize it because there are often no warning symptoms. **EyeCare America**, the public service foundation of the American Academy of Ophthalmology, encourages those without insurance to take advantage of its national **Glaucoma Eye Care Program**. The program offers glaucoma eye exams for those at increased risk of glaucoma. To see if you, a loved one or a friend, is eligible to receive a referral for an eye exam and care, call **1-800-391-EYES (3937)**, 24 hours a day, every day, year round. All eligible callers receive a referral to one of EyeCare America's 7,500 volunteer ophthalmologists.

receive a glaucoma eye exam and the initiation of treatment, if deemed necessary. Uninsured patients will receive the above care at no charge.

The **American Academy of Ophthalmology** is the largest national membership association of Ophthalmologists. They are a wealth of information on eye care. They offer programs, including patient education publications, information campaigns to promote eye health and safety. The Academy strives to provide balanced, credible and timely information on preserving and protecting vision.

For more information on the American Academy of Ophthalmology please visit www.ao.org.

*Those eligible for a referral through the glaucoma program

Macular Degeneration

Kierstan Boyd, American Academy of Ophthalmology, consulted with CalAgrAbility staff. "Macular degeneration, or MD, AMD or ARMD (for age-related macular degeneration), is the leading cause of vision loss and blindness in Americans age 65 and older," according to Boyd.

MD is a breakdown of the macula, a small area in the retina at the back of the eye that allows you to see fine details and to read and drive (Figure No. 3). Kierstan Boyd explains, "When the macula doesn't work correctly, central vision is affected by blurriness, dark areas or distortion as well as the ability to see near and far." (Figure No. 4)

CalAgrAbility statistics show that California farmers are part of the aging baby-boomer population. Farmers, now averaging between 55-65 years old may have signs AMD. "This is the body's natural aging process. It is unknown exactly why it develops and no treatment has been uniformly effective, says Ms. Boyd. However, MD alone does not result in total blindness. Even in advanced cases, people continue to have some useful vision and are able to take care of themselves. In many cases, MD's impact on vision can be minimal."

What to Expect at the Exam:

Eye M.D.s, ophthalmologists, detect AMD in medical eye exams that includes:

- a simple vision test using a chart resembling graph paper (Amsler grid);
- viewing the macula with an ophthalmoscope;
- taking photographs of the eye (fluorescein angiographs) to view blood vessels under the retina.

Good News...

Side vision is usually not affected, so a **farmer's** remaining sight is very useful. Often, those working in agriculture can continue with farm and leisure activities by using low-vision optical devices such as magnifiers, closed-circuit TV, large-print reading materials, talking and computerized devices.

Take a look at the suggestions on page 4!

CalAgrAbility recommends that farmers and workers with low vision talk to their M.D.s before operating machinery and doing hazardous tasks.



Figure No 3: MD affects central vision causing "blind spots". (Source: allaboutvision.com)

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Upcoming Events

March 29-31, 2005

BUILDING EMPLOYMENT OPPORTUNITIES FOR PEOPLE WITH DISABILITIES

A Regional Disability Training Forum. An opportunity to learn and share information about the challenges and solutions for helping people with disabilities access training and find employment.

The Doubletree Hotel
Sacramento, California. For more information visit:
<http://www.cce.csus.edu/edd/>

April 12-15, 2005

University of Kentucky will host the **2005 USDA Priester Extension Health Conference** at the Radisson Hotel in Lexington, Kentucky. Topics in the environmental health track include occupational health, farm safety, air and water quality, agricultural medicine issues, children's environmental health, and healthy homes. Visit the website for more information: <http://www.nnh.org/>

May 17-21, 2005

8th Annual Rural Health Conference

Sheraton New Orleans Hotel
New Orleans, Louisiana
For more information, visit <http://www.nrharural.org/> or contact Kathy Siress at the NRHA at (816) 756-3140 or siress@NRHArural.org

May 22-25, 2005

13th Annual Health Literacy Summer Institute Portland, Maine. Learn plain language skills to communicate your safety and health messages clearly to diverse consumer audiences. For more information and registration, go to: www.healthliteracyinstitute.net

We're on the Web!

<http://calagrability.ucdavis.edu/>

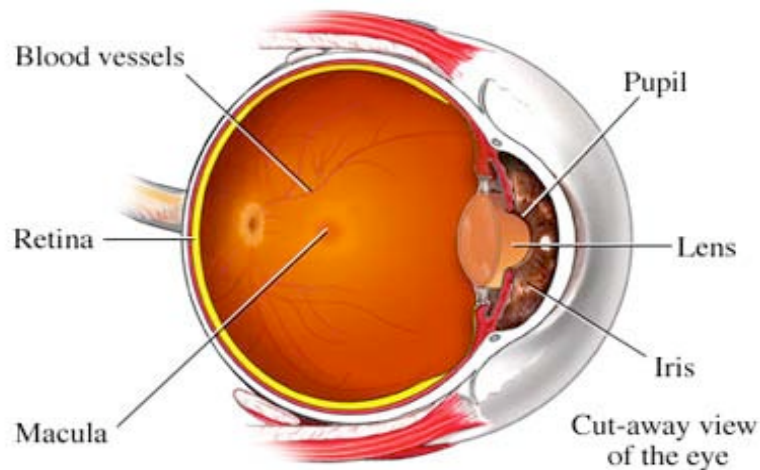


Figure No. 4: The Macula (Source Copyright © 2004 Nucleus Communications, Inc. www.nucleusinc.com)

Symptoms, Diagnosis and Treatment of Macular Degeneration

Macular degeneration affects people differently. Sometimes one eye loses vision and the other eye sees well for years. When both eyes are affected, loss of central vision is noticed quickly. Vision loss is detected when:

- words on a page look blurred
- a dark or empty area appears in the center of vision
- straight lines look distorted

Whats Good For Macular Degeneration

Take Your Vitamins! AAO told CalAgrAbility that they encourage use of antioxidant vitamins and zinc, which may reduce the impact of AMD. A large scientific study found that those at risk of developing advanced AMD lowered their risk by about 25% when treated with a high-dose combination of vitamins C, E, beta-carotene and zinc. Among those who have either no AMD or very early AMD, the supplements did not appear to provide an apparent benefit.

“Vitamin supplements are not a cure, nor will they restore

vision, says AAO’s Ms. Boyd. However, specific amounts play a key role in helping some high-risk people to maintain their vision. **See your ophthalmologist** to determine your risk level before taking supplements.” Ask your eye doctor about this.

Types of macular degeneration are treated with **laser surgery** and **photodynamic therapy** to slow or stop leaking blood vessels that damage the macula. Though not cures, these procedures may preserve more sight. Your Eye M.D. can prescribe optical devices to enhance vision.

Did You Know...



Valentine's Day is traced to old English belief that birds choose their mates on February 14.

Article continued on page 4

Resources

American Academy of
Ophthalmology

www.aao.org

Good Hope Hospital Eye
Department

<http://www.goodhope.org.uk/departments/eyedep/glaucoma.htm#Parts%20of%20the%20eye%20involved>

Farmworker Eye Care Network

<http://www.fenet.org/about.htm>

University of California, Davis

Department of Ophthalmology

<http://www.ucdmc.ucdavis.edu/ophthalmology/>

Shiley Eye Center, Department of
Ophthalmology, University of
California, San Diego

<http://eyesite.ucsd.edu/>

National Institute of Health
Medline Plus

<http://www.nlm.nih.gov/medlineplus/eyediseases.html>

We're on the Web!

<http://calagrability.ucdavis.edu/>

The Low Down on Low Vision... You Can Still Work Safely

For those on farms with low vision, AgrAbility programs suggest using your "ears to see" and using your ingenuity to create safer easier ways to do daily chores. Here are a few ideas:

Create audible landmarks:

* Hang wind chimes outside the house as audible landmarks.

* "Tune" farm building! Use different-sounding chimes to identify buildings and their corners.

A bump in the night...

* Suspend tennis or other balls with twine to mark when to stop a truck, tractor, etc. as you drive into a building. When the ball bumps the windshield, it's time to stop.

* Hang burlap bags about 2 feet from low-hanging beams or light fixtures. Burlap is recommended as it catches easily on caps to warn you to duck your head.

Tactile Coding....

* Color code tools like rakes, hoes, shovels. Wrap colored duct or electrical tape around handles.

* Wrap rubber bands around tool handles, i.e., to distinguish between regular and Phillips head screwdrivers, metric vs. standard wrenches, **USE YOUR IMAGINATION!**

* Use cloth or self-adhering Velcro to mark ON-OFF buttons on machinery, radios, TVs. (Source: http://www.oznet.ksu.edu/news/sty/2003/safe_farming082103.htm)

***Always ask your doctor before performing hazardous, strenuous work or operating machinery.**

Let there be Light!

Light is essential to vision. Kind and amount of light varies with the task. As we age, we need more light to do daily tasks. In fact, the need for more light increases approximately 10% per decade of life.



Light up work areas and walkways; add lights and check bulbs regularly.



Motion sensors for indoors and out, farm buildings, garages, driveways, doorways can warn with visual and audio beeps and can turn lights on automatically.



Reduce glare and sun in eyes. Reposition work areas, seats, machinery at different times of day.



Glare-reducing glasses are available.



Chromalux bulbs (60 or 100 watts) are used by people with MD and diabetic retinopathy.

About CalAgrAbility ...

The California AgrAbility Project's primary goal is to help farmers, agricultural workers, ranchers and their families to continue working in agriculture regardless of physical limitations, impairments and disabilities. Staff will help conduct on-site assessments and identify appropriate assistive technologies to make the job safer and easier. This is supported by the CSREES USDA under special project number 2003-41490-01584.

1-800-477-6129

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