

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

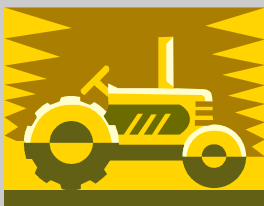
For Spanish call

1-888-877-3257, ext 117

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916-679-3117

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Promoting Success in Agriculture for People with Disabilities and Their Families

"I Gotta Get Outa This Joint!" *Farming with Arthritis*

It is hard to believe that one out of every three people in the US suffers from arthritis, more than 66 million of us. Nearly one-fourth of all Californians have it, and it is not just for "old folks." Arthritis is the leading cause of disability of Americans over the age of 15 and is the *number one cause of work disability*, according to the California Arthritis Foundation,

About half of the 5+ million Californians with the disease experience mobility problems or other limitations on their activities. Most of us don't even realize that our aches and pains are not just "weather changes" or "old age."

CalAgrAbility's research shows that certain occupations may actually cause arthritis and farming is one of them (*Annals of Internal Medicine V. 133 Issue 8, October 2000, pp 635-646*). The nature of farm work increases the likelihood of developing osteoarthritis.

Okay, so you have the creaky knee joints, stiff back, or toes that won't bend. There *are* ways of managing arthritis and accommodating your needs to get around the house, the farm, anywhere you go.



Figure No. 1: CalAgrAbility consumer farming with osteoarthritis

Arthritis? It's Greek to Me!

"Arthro-" is Greek for "joint" and "-itis" indicates inflammation...arthritis is the inflammation or swelling of the joints. "There are more than 100 forms of arthritis and related diseases, according to Mark Warren, President, Northeastern California Chapter Arthritis Foundation, and each has the symptoms of pain, swelling, and stiffness of the joints and surrounding tissues. And they do not discriminate; anyone can have arthritis including children. However, some people are more prone to developing it than others."

More than half those affected are under age 65 and it strikes women more often than men. Other contributing factors may be (ref. Arthritis Foundation):

- Over 55 years old
- Overweight
- Injured joints
- Family members with arthritis

The "Arthritis Family" includes: rheumatoid, juvenile and osteoarthritis, gout, ankylosing spondylitis, lupus, scleroderma, and fibromyalgia. It is vital to see a doctor for diagnosis. Treatment differs for each type. The two most common types, rheumatoid and osteoarthritis are discussed here.

Article continued on page 2

Events

Upcoming Events

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 18, 2005
 11th Annual Rural Minority and Multicultural Health Conference
 "State of the States' Rural Racial and Ethnic Health Disparities: Yesterday, Today and Tomorrow"
 Sheraton New Orleans Hotel
 New Orleans, Louisiana
 For additional information, contact Rosemary McKenzie at rmckenzie@NRHArural.org or (816) 756-3140.

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

June 3-5, 2005
Abilities Expo - Southern California
 Anaheim Convention Center, Anaheim, California.
 Attract large numbers of individuals with disabilities, seniors, families and caregivers, healthcare and education professionals around the country. For information call 800-385-3085 or visit <http://www.abilitiesexpo.com>

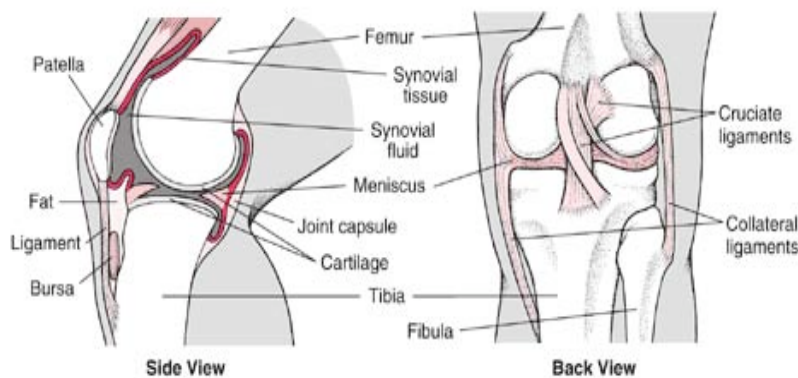
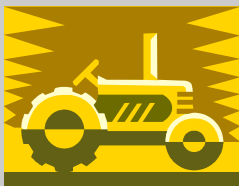


Figure No 2: Knee joint surrounded by a capsule containing synovial fluid (Source: Medline Plus)

Joint Jargon

There are an estimated 300+ joints in the human body. *Joints*, located where two bones meet, are covered with *cartilage*, to prevent rubbing. The knee joint, for instance, is surrounded by a *capsule* (Fig. 2) containing *synovial fluid* that provides nutrition and lubrication, so joints move smoothly. The knee also has rubbery layers of cartilage, the *medial and lateral meniscus*, on the inside and outside of each knee. *Menisci* are shock absorbers. *Ligaments*, like elastic bands, connect bones to each other and keep them in place as muscles lengthen and shorten to make the joint move. (<http://www.ncbi.nlm.nih.gov/>)

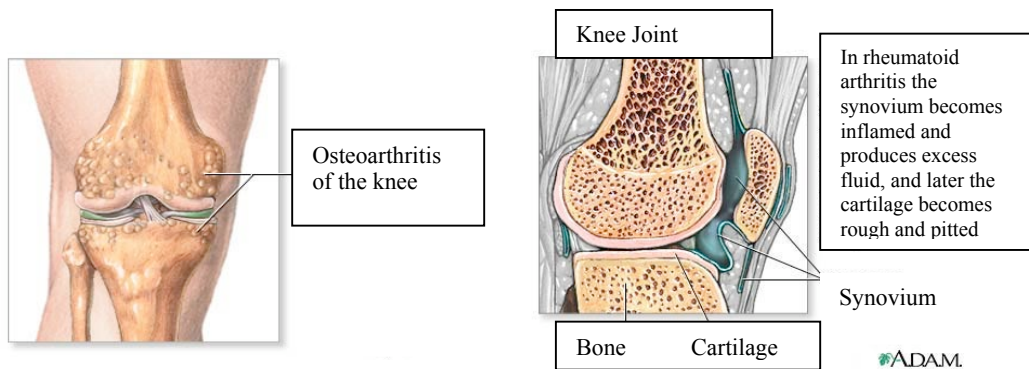


Figure No. 3: OA and RA affects cartilage and joint movement (Source: Medline Plus)

Osteoarthritis (OA)

Osteoarthritis (OA) is a chronic joint disease, where cartilage on the ends of bones deteriorates causing bones to rub together (Fig. 3). Cartilage may eventually wear away entirely. OA is often attributed to "wear and tear" or old age, but other causes are congenital defects, *injury* and metabolic disorders. For farm folks this should raise the flag of caution to prevent injuries. How many times have you sprained ankles and knees by walking in fields, dodging gopher holes, or bending and lifting heavy objects?

OA affects knees, wrists, ankles, fingers, and toes, as well as, hips, neck, and lower spine. As it progresses, there may be pain when resting the joint. Some report pain that awakens them from sleep.

Common symptoms:

- joint pain during or after use, or after inactivity
- Discomfort as weather changes
- Swelling and stiffness
- Bony lumps on the middle or end joints of fingers or the base of the thumb
- Loss of joint flexibility

Article continued on page 3

UCD

Upcoming Events

June 16-18, 2005

Putting Local Food on the Table Farms and Food Service in Partnership

Kenyon College
Gambier, Ohio

For more information, go to:
www.foodsecurity.org

June 23-27, 2005

(Pre-Conference: June 23-24)

RESNA Annual Conference: 25 years of Rehabilitation Engineering... looking forward to new horizons, Hyatt Regency, Atlanta, GA.

Professional development opportunities at the conference include a hands-on clinical practicum, a special session on rehab, engineering sponsored by NIH, a special international research session, and RESNA's instructional program during the pre-conference. For additional information, visit:

<http://www.resna.org/Conference/2005Conference/2005conf.php>

Did You Know...



Each foot has 26 bones and 33 joints. Together both feet contain a quarter of all the bones in the body! (*American Podiatric Medical Association, Inc.*)

We're on the Web!

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

Rheumatoid Arthritis (RA)

Rheumatoid Arthritis (RA) is a chronic autoimmune disease where the body attacks itself. RA usually affects joints symmetrically (on both sides equally). First, excess synovial fluid is produced and cartilage becomes pitted causing pain, warmth, stiffness, redness and swelling. The next stage is rapid division and growth of cells, or pannus, thickening the synovium. In stage three, inflamed cells release enzymes digesting bone and cartilage. The joint loses shape and alignment.

RA attacks wrists, hands, elbows, shoulders, knees, and ankles, is systemic and can affect other organs (Fig. 3). "Rheumatoid arthritis is one of the most serious and disabling types of arthritis affecting 2.1 million Americans. Though some cases are mild, RA is often chronic and progressive, causing deformities and disability. Early diagnosis is essential, says Warren of the California Arthritis Foundation, studies have shown that early aggressive treatment can limit joint damage."

Stress and Strain...What a Pain!

CalAgrAbility rehabilitation research shows the first step in preventing arthritis is reducing strain on joints.

If you do farm work, take a serious look at how you do routine tasks where you bend, stoop, kneel, lift and crouch.

Farmers have high rates of hip osteoarthritis. Jobs requiring kneeling or squatting along with heavy lifting are associated with high rates of knee and hip OA. Stresses on the knee increase when farmers crouch or squat.

Lifting at the same time only increases strain on knees. If you turn while crouching and lifting additional torsional stress occurs (*Annals of Int. Med. V. 133. 8, Oct. 2000, pp 635-646*).

The Framingham Study shows that such activities cause 15% to 30% of knee osteoarthritis in men. Repetitive and excessive lifting reaching, pushing and pulling should be modified to reduce joint strain.

Arthritis Foundation: California Northeastern Chapter

CalAgrAbility extends a hardy "thanks" to Mark Warren, President of the Arthritis Foundation's Northeastern California Chapter, for his cooperation on producing this newsletter. There are four California Foundation chapters. The Northeastern Chapter offers programs to educate and improve the lives of Californians with arthritis: ASHC: The Arthritis Self Help Course; PACE: The People with Arthritis Can Exercise Program; and aquatics and support groups. *Visit their website*

<http://www.arthritis.org/Communities/Chapters/Chapter.asp?chapid=35>

The Arthritis Foundation and Breaking New Ground, Purdue University, IN, produced a booklet on Arthritis and Agriculture.

To receive a copy of the booklet contact CalAgrAbility at 1-800-477-6127.

These Simple Ergonomic Suggestions Can Help!

The following simple suggestions can help you prevent arthritis or prevent further injury and decrease pain:

- change *postures* often
- eliminate twisting* of the upper torso
- stretch* upper body throughout the day
- use *mechanical* lifts
- use *easy grip tools*; hammers, scissors, pliers
- sit* whenever you can while working; use a stool
- pace* yourself, take breaks

Good News...

Take a look at the suggestions on page 4!

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

Article continued on page 4

Resources

Arthritis Foundation

www.arthritis.org

Arthritis society

<http://www.arthritis.ca/types%20of%20arthritis/osteoarthritis/default.asp?s=1>

Annals Of Internal Medicine

<http://www.annals.org/cgi/content/full/133/8/635>

Cornell. New York AgrAbility Fact Sheet

<http://www.vet.cornell.edu/public/CUAgri/agrability/>

NASD: Health Farming With Arthritis? Farmability Can Help

<http://www.cdc.gov/nasd/docs/d000901-d001000/d000968/d000968.html>

Farming with Arthritis University of Missouri-Columbia

<http://www.marrtc.org/products/products.html>

Breaking New Ground, Purdue University, IN

<http://www.breakingnewground.info>

We're on the Web!

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

The Leg Bone's Connected to Hip Bone

Using one assistive device can relieve stress and pain on several joints. Here are some low cost suggestions from AgrAbility staff on farming with arthritis (<http://www.agrabilityproject.org/>)

FOR YOUR KNEES & BACK

- Add A Step and hand-holds to farm machines use non-slip material (Fig. 4)
- Knee Pads when you cannot avoid kneeling (Fig.4)
- Portable Stool or Utility Vehicle *sit down on the job* whenever you can or hitch a ride especially on uneven ground
- Cushioned Mats around work area to reduce knee and back stress
- Use wheels when pushing or pulling to reduce friction and lessen resistance between surfaces and avoid lifting and carrying

SUPPORT UPPER BODY

- Suspension or Swivel Seat or Cushion on machinery
- Adjustable Arm Rests for added back, shoulder and elbow support
- Additional Mirrors inside and outside of tractor reduce twisting

WRISTS AND HANDS

- Spinner Knobs, Enlarged or Extended Handles help with grasping and range of motion (Fig. 4)
- Gloves to protect your hands and improve grip
- Thicker Grips on tools and utensils for better grasp
- Automatic or Self-Adjusting Tools: ratchets, power and air tools reduce repetitive motion
- Communication Devices cellular phones or two-way radios save unnecessary trips and are essential in case of emergency

(Figure 4 photos from National AgrAbility Project, Madison, WI and Breaking New Ground, Purdue University, IN)

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



Figure 4

California AgrAbility Project

