

# WYOMING AgrAbility

Promoting success in agriculture for  
people with disabilities and their families

## Wyoming ranchers and farmers work with injuries, limitations, and disabilities



*Randy Weigel*



*Amanda Hearne*

*By Randy Weigel and Amanda Hearne*

On behalf of Wyoming AgrAbility and its partners, we are pleased to provide the people of Wyoming with this newspaper insert. This is an outreach effort to provide educational information and resources on a variety of topics of interest to those who work and live in agriculture.

Agriculture consistently ranks as one of the nation's most dangerous occupations. Wyoming has more than 17,000 people directly or indirectly involved in production agriculture. The combination of workplace hazards, a maturing ranch and farm population, and limited access to health information and care makes the Wyoming agriculture sector susceptible to health problems and work-related injuries.

In fact, Wyoming's highest nonfatal occupational injury rate in a major industry group occurs in agriculture (including forestry, fishing, and hunting). The incidence rate is 17.1 per 100 employed in Wyoming compared to 6.2 in the United States.

For many individuals, injury, limitations, and disabilities jeopardize their rural and agricultural futures.

Authorized by the 1990 Farm Bill, the U.S. Department of Agriculture initiated funding for state-level programs to provide help on accommodating disability in agriculture. Twenty-five states are operating with this funding and together make up the National AgrAbility Project.

As one of those states, Wyoming created a partnership in 2006 with the University of Wyoming through the UW College of Agriculture's Cooperative Extension Service, the UW College of Health Sciences' Wyoming INstitute for Disabilities and Center for Rural Health Research and Education, Gottsche Rehabilitation Center in Thermopolis, and Wyoming Independent Living Rehabilitation in Casper. Through this partnership, Wyoming AgrAbility pools resources of occupational therapy, independent living, assistive technology, health education, and agricultural production for individuals and their families engaged in ranching, farming, or farm-related activities that have been affected by a disability, limitation, or injury.

Building on the strength of nationwide informational resources, along with a statewide network of agricultural, rural health, safety, and social agencies, Wyoming AgrAbility offers individual services for increasing self-sufficiency and independence. We hope the articles in this insert help in this effort.

For more information about ranching and farming with limitations and disability or to learn how Wyoming AgrAbility can help you or someone you know who is experiencing a disability, contact Wyoming AgrAbility toll-free at (866) 395-4986, e-mail [agrability@uwyo.edu](mailto:agrability@uwyo.edu), or visit the Web site [www.uwyo.edu/agrability](http://www.uwyo.edu/agrability).

*Randy Weigel is a University of Wyoming Cooperative Extension Service specialist and project director for Wyoming AgrAbility. Amanda Hearne is project coordinator in charge of the daily operation of Wyoming AgrAbility.*

UNIVERSITY  
OF WYOMING  
Cooperative Extension Service



CRHRE Center for Rural  
Health Research  
and Education

# Exciting technologies bode well for farmers and ranchers coping with disabilities

The future for farmers and ranchers who have experienced injury or limitations leading to disability can be enhanced through farm ergonomics, adaptations to farm equipment, advances in assistive technology, innovation in agricultural technology, and improved service delivery.

## Farm ergonomics

The science of ergonomics is matching the physical capabilities of the human body with the person's work tasks, tools used, and work environment. In agriculture, the goal is to make sure workers are uninjured, safe, and comfortable, as well as productive. Newly designed tractors with ergonomic features will benefit all producers, including those with limitations, through increased productivity and reduced risk.

Devices such as the "Ag-Cam," a camera mounted to the rear of the tractor with the monitor in the cab, allows a producer with limited movement to back up equipment without looking rearward. Adding a three-point hitch adaptation such as a Triangle quick-hitch helps to make changing implements safe, fast, and easy. The operator need

not dismount the tractor and wrestle with heavy equipment. Farm ergonomic tools such as strap-on stools, weeding stands, and lay-down work carts help prevent chronic back injuries for farm workers.

## Adapting farm equipment

For farmers and ranchers who cannot walk or climb because of a temporary or permanent disability, agriculture can be full of obstacles. The ability to move freely and be self-reliant is especially critical for those who work with heavy equipment. Tractors and other equipment can be adapted to accommodate those with disability or limitation by adding seat or platform lifts, finger-operated clutch and brake controls, additional or improved steps and handholds to improve safety when entering and exiting the tractor, and modified cab seats to reduce jostling and vibration.

## Assistive technology

Advances in assistive technology allow farmers and ranchers with disabilities to complete work tasks and decrease the potential or severity of secondary injuries. Examples of these technologies can be seen in new designs of wheelchairs and scooters. For example, a Smart-Wheel wheelchair propulsion analysis tool attached to a manual chair allows a clinician to reduce repetitive stress injuries to a manual wheelchair user's hand, wrist, and shoulder.

Power wheelchairs are being developed with independent suspension systems to reduce repetitive trauma to one's neck and back when traveling through rough terrain.

A new iBOT® Mobility System chair uses assistive robotics to allow it to actually climb stairs and maneuver in the most difficult terrain. The LE Journeyman Mobility Vehicle is a motorized scooter that allows the operator to move through mud, water, manure, and the difficult terrain of a farm or ranch.



Farm equipment has incorporated ergonomic features such as readily accessible controls.

## Innovative agricultural technology

Innovations occurring in precision agriculture and autonomous farming (farming without people) will benefit ranchers and farmers with disability. Automated feeding systems, driverless planting and harvesting equipment, and remote-sensing technology are examples of innovations that can assist a farmer or rancher with a disability stay productive in agriculture.

The use of assistive robotics, though still in the future, offers great potential to agriculturists. Agricultural engineers at the University of Illinois have invented "Agrobots," small mechanical robots that can wobble down corn rows scouting for insects, removing weeds, taking soil samples, and turning at the end of the row.

Researchers at the Massachusetts Institute of Technology are working on an early version of a robotic called Domo that can grasp objects and place

them on shelves or counters. Though all this sounds like science fiction, work is already occurring in agriculture. Vision Robotics Corporation, of San Diego, California, is prototyping robots that wheel through orchards plucking oranges, apples, and other fruits from trees. This work is being funded by agricultural associations concerned about the uncertainty of the migrant labor force.

## Service delivery through telecommunications

Finally, tele-medicine has enabled specialists from around the world to provide consultations using real-time video conference equipment.

This technology can be applied to the agricultural setting to observe the unique needs of the individual and the setting in which essential tasks must be performed. The consultant, hundreds of miles away, can immediately ask questions and request additional video camera shots to make appropriate worksite recommendations.

Researching needed information on worksite accommodations can be quickly achieved over the Internet. Effective use of this technology will increase timeliness in service provision and reduce the cost associated with service delivery. The need to travel long distances to provide or receive information and assistance will be reduced.

Innovative technologies, changes in agriculture, and new service delivery strategies will continue to develop that will ultimately support the choice of farmers and ranchers with disabilities to remain productive in agriculture.

For more information about items in this article or Wyoming AgrAbility, call toll-free (866) 395-4986, e-mail [agrability@uwyo.edu](mailto:agrability@uwyo.edu), or visit [www.uwyo.edu/agrability](http://www.uwyo.edu/agrability).

**(Disclaimer:** The University of Wyoming, Wyoming AgrAbility and its project partners, and the U.S. Department of Agriculture do not endorse or recommend any of the products described at the exclusion of other suitable products.)



iBOT® Mobility System chair



## Helping farmers and ranchers through work-site assessments

An important goal of Wyoming AgrAbility is to help farmers and ranchers who have experienced injury or limitations leading to disability stay active and productive in their operation.

One way is through work-site assessments of a farm or ranch operation. Conducting assessments involves observing and analyzing the barriers the person is facing on the farm or ranch and, possibly, in the home. An AgrAbility staff member will visit the farmer's or rancher's property to observe, discuss, measure, and record the specific functional limitation the person is experiencing, the environmental barriers, and any risk factors on the farm or ranch.

The staff member will also discuss goals the individual may have about tasks he or she used to be able to do and would like to do again. Sarah Perry, occupational therapist with the Gottsche Rehabilitation Center in Thermopolis, Wyoming, conducts the Wyoming AgrAbility work-site assessments.

According to Perry, "Three types of assessments may be performed: a functional assessment,

an agricultural assessment, and a home accessibility assessment. The producer decides which assessment takes place."

A functional assessment, Perry continues, "is an assessment of the farmer's or rancher's physical and cognitive functioning. Depending upon the disability, the assessment may cover abilities such as standing, stooping, reaching, climbing, strength, range of motion, hearing, vision, memory, and temperature tolerance, to name a few."

The agricultural assessment focuses on details about the operations of the farm or ranch and the workplace barriers imposed by the functional limitations of the disability. Touring the operation, while discussing it with the farmer or rancher, helps Perry determine the size and scope of the barriers. The visit can lead to suggestions for machinery or facility modification, if needed, and provide a better understanding of specific tasks that are workplace barriers.

The home accessibility assessment looks at issues of safety, efficient methods for completing activities of daily living, and architectural barriers related to

disability. For example, a person with a newly acquired spinal cord injury may need a bathroom modified to facilitate independent functioning in self-care activities. In addition, farmers and ranchers with disabilities may have family members who provide additional assistance.

In providing a home accessibility assessment, the safety and well-being of caregivers is also considered. For example, are they using ergonomically correct methods of helping the transfer from wheelchair to

the toilet? A home accessibility assessment will most likely be conducted by an independent living specialist from Casper-based Wyoming Independent Living Rehabilitation or Wyoming Services for Independent Living in Lander.

Whatever type of assessment is undertaken, the outcome of the assessment is:

- Identification of significant workplace and home barriers and functional limitations that prevent completion of desired tasks.

- The opportunity to discuss desired work-site modifications and machinery modifications, possible task restructuring, or the assignment of certain hard-to-perform tasks to others.
- The opportunity to formulate specific goals and action plans that will help the farmer or rancher increase independence, productivity, and profitability.

Perry says, "The process of assessing is a problem-solving, give-and-take activity. The producer and Wyoming AgrAbility talk things through, clarify priorities, discuss alternatives, and suggest safety and health improvements. Working in partnership with the farmer or rancher, Wyoming AgrAbility works to help the farmer or rancher continue to do what he or she loves – farm and ranch."

If you would like a Wyoming AgrAbility assessment, or know of a farmer or rancher who might benefit from a visit from Wyoming AgrAbility, call toll-free (866) 395-4986, e-mail [agrability@uwyo.edu](mailto:agrability@uwyo.edu), or visit the Web site [www.uwyo.edu/agrability](http://www.uwyo.edu/agrability).



# Selecting hand tools: the why's and how's

Selecting the proper hand tool for a task is not only important for efficiency but also for the health of the operator.

Workers are more likely to complete tasks quickly and with fewer mistakes when working comfortably. Using appropriate tools with ergonomic features also reduces potential musculoskeletal illness or repetitive motion syndromes.

A tool is only ergonomic when appropriate for the task and fits the operator's hand with no awkward posture, contact pressures, or other safety/health risks. Ergonomic tools should meet goals of decreasing force or grip strength required, decrease repetitive motions associated with tool use, decrease awkward body or wrist postures, and decrease vibration to the hand and wrist.

To maximize this potential, operators should consider the following:

- Select a tool appropriate for the task. Wrenches are not hammers; using inappropriate tools could damage the tool and could cause the operator pain or injury.
- Use tools that allow the wrist to stay straight. Awkward postures require more force than necessary and reduce grip strength. Tools with bent handles often work better than those with straight handles when force is applied horizontally. Tools should be selected for use in either hand.
- Use good-quality tools in well-maintained condition. Replace or repair defective or damaged tools
- Pull on wrenches or pliers; do not push unless the tool is held with an open palm
- If using a tool belt, tools should be at the sides – not behind the back
- Do not wear bulky gloves while using hand tools
- Select tools that fit the hand. Tools should feel comfortable and have a handle in the range of 1¼-2 inches in diameter. Consider the "OK" method:

Make an OK sign using thumb and index finger then measure the diameter of the "O" formed by the fingers. This indicates the optimum grip for the individual. Don't discount customization; it may be necessary and worth it in the long-run.

- For high-force tasks, use tools with handles longer than the widest part of the operator's hand (often 4-6 inches). Handles too short can apply pressure in the palm and cause potential injury.
- Select tools with non-slip surfaces to increase grip. Cushioned grips may provide the most comfort. Pipe insulation and duct tape or similar products can be used to easily modify handles.

Other considerations include using power tools, modifying work tasks or environment, or using tools with ratchet mechanisms. A free checklist for hand tool selection can be downloaded from [www.dir.ca.gov/dosh/puborder.asp](http://www.dir.ca.gov/dosh/puborder.asp).

Every operator is different, so a "perfect" tool is not available; however, some commonly available materials make it possible to modify tools to improve grip and reduce chances of injury. These products include Magic Wrap, Plasti Dip, My-Grip, thermoplastic, heat shrink tubing, tool wrap, Plastazote, and pipe insulation.

How do you know if there is a problem? Symptoms of repetitive injury may include tingling, swelling in joints, decreased ability to move, and decreased grip strength, pain, continual muscle fatigue, and numbness or change in skin color of hands and fingers. Symptoms may appear suddenly or over time. Damage may be serious when symptoms appear; prevention is the best alternative.

If interested in more information, please contact Wyoming AgrAbility at [agrability@uwyo.edu](mailto:agrability@uwyo.edu) or call toll-free (866) 395-4986, or see the resources below.



## Farming and ranching daily with arthritis

According to the Centers for Disease Control and Prevention, 27 percent (104,000) of adults in Wyoming report living with some form of arthritis.

Approximately 31 percent of Americans clinically diagnosed with arthritis report experiencing limitations in their normal work routine. More than 50 percent were age 75 and older. Ranchers and farmers are heavily affected by this disease, which can reduce their ability to perform everyday tasks efficiently and to the best of their ability.

Several steps can help alleviate symptoms and allow performance of day-to-day tasks on the ranch or farm.

- Avoid long durations of gripping or grasping objects tightly; build up handles or levers with padding to reduce amount of grip needed.
- Avoid jarring motions or shocks when operating or servicing equipment. Never jump from equipment, and take breaks to stretch and walk.
- Maintain proper posture.
- Move around; don't stay in the same position for extended periods.
- Use power equipment to move and hoist heavy objects when possible.
- Use caution when entering and exiting equipment. Climb one step at a time leading with the weaker or more painful leg. Consider installing additional grab bars or step extensions.
- Wear good-quality shoes with proper fit to support feet and ankles to relieve pressure, absorb shock, and reduce pain.
- Use assistive aids such as handle extensions, canes etc. Aids such as simple splints can be used to support weak fingers and prevent deformities.

- Use hot and/or cold treatments to help reduce pain.
- Practice simple daily exercises such as range-of-motion, strengthening, and fitness or endurance exercises to reduce chances of painful movement or potential deformities. Walking, bicycling, and swimming are examples of exercises that may help alleviate symptoms
- Conserve energy by pacing tasks, and match them with times you are most able to complete them.

Ranchers with arthritis should take extra precautions when working with livestock to reduce the chances of further or secondary injuries. Adding gates and panels to limit direct contact can assist while sorting, treating, or shipping animals. Dairy farmers may consider automatic milking unit detachers to reduce the number of times they must bend and reach.

Automatic gate openers or cattle guards and automatic hitching systems allow easier access and reduce the number of times a farmer or rancher with arthritis must mount and dismount a tractor or other vehicle.

Remember that working with your doctor to manage arthritis is the best approach. Stay educated, work smart, and learn to work with, rather than against, your arthritis.

If you or someone you know has additional ways they continue to farm and ranch with arthritis and you would like to share, or, if you would like additional information from Wyoming AgrAbility, please call toll-free (866) 395-4986 or e-mail [AgrAbility@uwyo.edu](mailto:AgrAbility@uwyo.edu).

\* A portion of the information shared is from the Breaking New Ground Resource Center at Purdue University and the Arthritis Foundation



**What to look for when selecting or modifying hand tools to provide a better fit with the user. See [www.agrabilityproject.org](http://www.agrabilityproject.org)**

**Easy Ergonomics: A guide to selecting non-powered hand tools. See [www.dir.ca.gov/dosh/puborder.asp](http://www.dir.ca.gov/dosh/puborder.asp)**

**Construction solutions: Ergonomic hand tools. See [www.cpwrconstructionsolutions.org](http://www.cpwrconstructionsolutions.org)**

**General hand tool operation. See [www.ccohs.ca/oshanswers/](http://www.ccohs.ca/oshanswers/)**

# Managing work tasks for the rancher and farmer having chronic pain

More than 100 million Americans live with chronic pain, according to the American Pain Society in 2006.

Chronic pain is any pain stemming from illness, injury, disorder, or undiagnosed pain that lasts for months or years. Chronic pain is most commonly attributed to arthritis, lower-back, bone/joint, and muscle pain.

The American Chronic Pain Association (ACPA) offers resources, support groups, and other suggestions that, combined with proper medical treatment, can aid individuals back toward being healthy and leading functional lives.

The following suggestions have been adapted from ACPA suggestions.

**Accept the pain.** Recognizing pain and the possibility of no treatment equips individuals to manage pain and continue to stay productive.

**Set priorities.** Determine tasks most important for the day. This list should change as often as necessary. Decide which tasks can be accomplished the next day if you don't feel able to complete them. Delegate tasks if possible. Alternate easier projects with more complex tasks; also, allow for breaks between tasks. This helps you to work longer and more efficiently while reducing the chance for additional injury.

**Set realistic goals.** Can a large task be reduced to smaller amounts of work or be divided

over several days? Be able to identify limitations, and be willing to ask for help. Accomplishing these tasks over time may aid in one's belief they are able to be strong and in control.

**Recognize emotions.** Emotion can affect how our bodies interpret and respond to pain. Anxiety leads to tenseness, which causes tightening of muscles, often increasing pain. Identifying and dealing with emotions can reduce stress and may offer some pain relief.

**Exercise.** Becoming inactive may increase pain symptoms. Farm and ranch work requires physical activity, but recognizing overall muscle tone and flexibility can assist in pain management and reduce the chance of further injury. Mild stretching a few minutes a day can make a difference. Practice good nutrition, and maintain a healthy weight.

**Duplicate and organize, modify.** Keep frequently used tools at each location of use if possible. Use power tools if possible. Reduce joint stress by sitting while doing tasks that allow so, such as working at a workbench. Use scissors to open bags and packages. Use wheeled carts to transport heavy loads or to reduce trips. Organize closets, work benches, and other storage areas so heavy and frequently used objects are easiest to reach. Leave items that are used most on the counter for easy access. Tape pipe or tubing to garden tools to limit or reduce bending. Use pipe insulation to add bulk to handles to reduce stress on the hands. If possible, use raised garden beds.

## Alternative therapies

Alternative therapies may also provide relief from chronic pain. These should not be replacements for medical treatment. Discuss options with your healthcare provider. These therapies can include:

**Acupuncture:** needles are inserted just below the skin. It is believed this allows fluids to flow better and promotes healing. Seek treatment from a professional. The American Board of Medical Acupuncture (<http://www.dabma.org/physicians.asp>) provides a list of board certified physicians who practice acu-

puncture. Wyoming does not regulate the practice of acupuncture. Some medical doctors offer this treatment. Asking questions may help identify the most qualified individual: How long have they been practicing acupuncture? Do they use any other forms of alternative medicine? What are their credentials?

**Chiropractic therapy:** Pain is treated by moving body parts in certain ways. This usually includes the spine and joints. Consider referrals from friends or family members. The American Chiropractic Association Web site can also assist in finding a practitioner in your area ([www.amerchiro.org/](http://www.amerchiro.org/)).

**Dietary supplements:** Vitamins, minerals, herbs, or other plants may ease chronic pain. Consult your healthcare provider for suggestions.

**Mind-body therapy:** Biofeedback training is a way to control bodily reaction to stress and pain. This therapy uses electrodes attached to a monitor to identify how the body reacts to stimuli and then teaching the individual how to control these changes in ways such as slowing the heart rate. See the Applied Psychophysiology and Biofeedback Web site ([www.aapb.org/i4a/pages/index.cfm?pageid=1](http://www.aapb.org/i4a/pages/index.cfm?pageid=1)) for assistance in finding a provider in your area.

**Hypnosis:** It involves being placed into a trance condition. The provider will then suggest ways to heal you. See [www.apmha.com/](http://www.apmha.com/) for more information.

**Meditation:** It teaches how to focus inside oneself. The goal of meditation is to promote calm and peacefulness. Many Web sites offer tips and techniques for yoga and meditation. There may also be classes offered in your community.

**Relaxation therapy:** It teaches how to calm body and mind with the goal of feeling less physical and emotional stress.

**Electrical stimulation:** It sends mild and safe electrical signals to the body, which can decrease pain. Visit with your healthcare provider for more information.

**Heat and cold application:** Discuss this option with your care provider. Some pain



## Coping with pain workshop in Worland May 1

*Helping ranchers and farmers, their families, and the healthcare community better understand chronic pain and cope with the challenges is the subject of a program May 1 in Worland.*

*Sponsored by Wyoming AgrAbility and the Washakie County University of Wyoming Cooperative Extension Service office, "Growing Well with Pain" is 9 a.m. to noon at the Washakie Learning Center.*

*Penny Cowan, founder and director of the American Chronic Pain Association, is the featured speaker. The program will also include time for discussion between people with chronic pain and healthcare providers.*

*The program is free but registration is encouraged. Call Wyoming AgrAbility toll-free at (866) 395-4986.*

decreases with warmth, other with cold, and some with a combination. A warm shower on a cool day or cool shower on a hot day may also promote muscle relaxation.

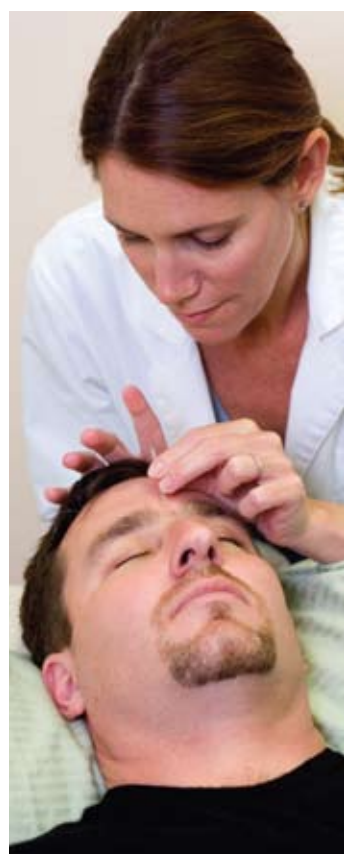
**Rehabilitation:** It includes physical (PT) and occupational (OT) therapy. In PT, exercises are used to strengthen the body and encourage healing. OT uses work, self-care, and activities to assist in daily living. These include skills (or modifications to current skills) for bathing, dressing, cooking, eating, and driving.

Untreated chronic pain can affect one's ability to work or care for her or himself. It may also affect mood, sleep, and relationships with others. These cycles

may lead to suffering and depression. Seek assistance in treating chronic pain to continue with everyday tasks and pleasures to continue to live to the fullest.

For more information on chronic pain management, call Wyoming AgrAbility toll-free (866) 395-4986, e-mail [agrability@uwyo.edu](mailto:agrability@uwyo.edu), visit the Wyoming Department of Health at [www.health.wyo.gov/](http://www.health.wyo.gov/), or see the American Chronic Pain Association Web site at [www.theacpa.org/](http://www.theacpa.org/).

(Disclaimer: The University of Wyoming, Wyoming AgrAbility, its project partners, and the United States Department of Agriculture do not endorse or recommend any medical procedures or practices.





## Safety and health suggestions for working senior ranchers and farmers

Generally speaking, reducing or controlling injury risks and hazards is not any different for senior ranchers and farmers than for any other age group.

Making physical changes to the working environment to completely remove or lessen exposure to hazards is easier than relying on an individual's behavior around the hazard.

Following are suggestions that enhance senior producers' safety and health. Examples of agricultural safety and adaptive equipment can be found on the National AgrAbility Web page [www.agrabilityproject.org/assistivetech/](http://www.agrabilityproject.org/assistivetech/)

- Increase lighting levels in barns and other buildings to accommodate vision needs of older farmers and ranchers.
- Ensure all steps, stairs, and handrails are of excellent quality and well-lighted. Light switches should be at both ends of stairs and by all entrances.
- Put non-slip surfaces on walkways and steps where possible.

- Have easily operated or maneuvered fence gates, building doors, and animal handling devices.
- Use properly fitted and easily accessible personal protection devices such as safety glasses or face masks.

In the agriculture industry, the 65-and-over age group had the greatest number of fatalities involving machinery-related incidents. Most often, the machinery was a tractor or piece of agricultural production equipment. Each year, the Centers for Disease Control and Prevention estimates tractor rollovers account for approximately 130 fatalities. It is important senior farmers and ranchers pay special attention to their ability to safely operate a tractor.

### To reduce tractor operation risks, farmers and ranchers might:

- Consider trading in older, less-safe tractors for newer, safer models.
- Retro-fit older tractors, when possible, with roll bars (often called ROPS,

rollover protection system) and a seat belt.

- Ensure all shields are in place and tractor lights, brakes, tires, etc., are functional and well maintained.
- Refrain from carrying passengers; consider limiting tractor operation to daylight hours and roads with little vehicular traffic.
- The safest tractor for a senior is a newer tractor with an enclosed cab and ROPS.
- Senior agriculturists should be aware of over-the-counter drugs and prescription medications that may reduce alertness, decrease the

sense of balance, or interfere in some other way with expected work tasks.

### Get adequate rest, eat nutritiously, and wear proper work clothes and footwear.

- Take work breaks. Get off the tractor and walk around. Always stop when tired.
- Know the symptoms of heart attack and stroke (American Heart Association [www.americanheart.org](http://www.americanheart.org)).
- Don't perform farm or ranch work that may be risky for you. Wyoming AgrAbility has information on identifying high-risk

work tasks for senior farmers and ranchers.

- Senior producers should obtain regular medical check-ups (at least once a year) for vision, hearing, balance, and muscular range and mobility.
- They should consult with a family physician about how physical limitations may affect safety and health at work and if any prescriptions can interfere with safe operation of machinery.

There are benefits that come with age. Older ranchers and farmers have the wisdom and experience many younger workers lack. Use enhanced judgment and skill to compensate for decreases in reaction time and muscle strength that are inevitable.

For more information, contact AgrAbility by calling toll-free (866) 395-4986, or e-mail [agrability@uwyo.edu](mailto:agrability@uwyo.edu).

Source: National Ag. Safety Database, *Safety for Aging Farmers* <http://www.cdc.gov/nasd/docs/d001601-d001700/d001618/d001618.html>



# When injury strikes: The challenge of care giving

The period immediately following a disabling injury or illness is a critical time of transition for a ranch or farm family and the operation.

A disability brings enormous change to the entire family, often with little warning or time for preparation. It can be especially frustrating in a rural environment with lack of nearby medical or rehabilitation facilities, long travel times to obtain necessary medical supplies, and few supporting agencies or disability support groups.

Initially, much attention is given to the physical and emotional needs of the person with the disability; however, the caregiver may feel anger, guilt, or neglect.

Dr. Deborah Reed of the University of Kentucky has studied the impact of a disabling agricultural injury and describes it: *Following their husbands' permanently disabling injury, farm wives must adjust not only to the loss encountered directly by the injury but also to increased responsibilities, time demands, and role reversals. They are called on immediately post-injury to simultaneously provide care-giving skills, make family adjustments, and oversee management of*



*the operation. All the while, the wives feel they must remain positive to minimize their husbands' depression. Increased time and responsibility demands, along with the suppression of feelings, places a heavy toll on the wives. As a result, they can become exhausted both physically and emotionally.*

## Caring for the Caregiver

Sandra Bailey, extension specialist at Montana State University and coordi-

nator of the eXtension Family Caregiving Web site ([www.extension.org](http://www.extension.org)) emphasizes caregivers need to recognize negative emotions and signs of burn-out early so you can begin to deal with them. Recognition of the first warning signs may prevent a sense of being overwhelmed. Do you feel no matter what you do, it doesn't seem to be enough? Do you feel trapped? Is communication negative, tense, or sarcastic? Has caring given way to exhaustion and resentment? The National Family Caregivers Association says that, somewhere along the line, it is vitally important to stop, take a breath, and gain some control over the situation rather than letting the situation control you.

**Keep a positive attitude.** The most important choice is how to approach life from here on out. Being a family caregiver is never easy, but how it is approached – with a glass half full or a glass half empty attitude – is a choice you can and should make.

**Know yourself.** Knowing strengths and weaknesses allows you to set boundaries and gives confidence to know when to say “no” and when to ask for help – things many caregivers find hard to do. Embrace the 10 tips for family caregivers (right).

**Be proactive.** Being proactive means looking ahead and planning to the extent you can. It means trying to prevent crises rather than letting them happen. One proactive step is to make sure all the legal paperwork necessary for making critical medical decisions is complete.

**Research the situation.** One of the most important types of research is finding out as much as possible about your loved one's condition. This provides a powerful tool for conversing with the various medical professionals caring for your loved one.

**Accept changing roles.** After a disability affects your home, it often becomes necessary to change roles within the family. Rethink family, household, and chores. As a family discuss: Which tasks are essential? If some tasks can be eliminated? What new tasks can each family member learn? The entire family needs to rethink who can do each task best because of this new phase in your family's life.

An excellent resource, *Rural Caregivers: To Everything There is a Season*, can be found at [www.ruralcare.info](http://www.ruralcare.info). It provides caregiver resource materials, organizations for caregivers, disability related organizations, caregiver support networks, and more. Or, contact Wyoming AgrAbility at [agrability@uwyo.edu](mailto:agrability@uwyo.edu) or toll-free at (866) 395-4986.

As you deal with the challenges of care giving, remember the words of Sir Winston Churchill to the citizens of Great Britain during one of their darkest hours, “Never give up. Never, never, never give up!”



## 10 TIPS FOR FAMILY CAREGIVERS

**1** Caregiving is a job, and respite is your earned right. **Reward yourself** with respite breaks often.

**2** **Watch out** for signs of depression, and don't delay in getting professional help when you need it.

**3** When people offer to help, **accept the offer** and suggest specific things they can do.

**4** **Educate yourself** about your loved one's condition and how to communicate effectively with doctors.

**5** There's a difference between caring and doing. **Be open** to technologies and ideas that promote your loved one's independence.

**6** **Trust your instincts.** Most of the time they'll lead you in the right direction.

**7** Caregivers often do a lot of lifting, pushing, and pulling. **Be good to your back.**

**8** Grieve for your losses, and then allow yourself to **dream new dreams.**

**9** **Seek support** from other caregivers. There is great strength in knowing you are not alone.

**10** **Stand up for your rights** as a caregiver and a citizen.

# Prevention is key to reducing back pain, injuries

Many people suffer from back pain. Whether chronic, such as the result of an injury, or short-term, such as an incorrect body movement, prevention is the key to reducing or eliminating back pain and injury.

Back pain is the leading cause of work limitations among ages 18 to 64, according to the Center on an Aging Society at Georgetown University. Back pain is also the sixth most-expensive healthcare condition in the United States, according to the center.

In a needs assessment survey conducted by Wyoming AgrAbility, 87 percent of respondents in Wyoming report some form of back injury. Back injuries result in time lost from work and other activities, lost wages, and possible permanent physical damage. Remember, prevention is the key. With proper care and support, the likelihood of suffering a back injury is substantially reduced.

Prevention is not always an option. Factors such as family history cannot be changed; however, many factors stemming from lifestyle (such as weight, fitness, and flexibility) can be factors in prevention.

Limitations due to each individual's back pain should be evaluated to determine the tasks that pose the largest potential hazards and that should be modified or adapted. Assessment of limitations should be conducted by a healthcare professional.

Repetition, such as frequent lifting and/or twisting, is a major cause of back pain and back injuries. Such tasks contribute to muscle fatigue, which can lead to injury. Poor posture over long-term may also exacerbate pain, and this, coupled with stress and continued exposure to force, also increases risk of injury.



Back pain often leads to secondary limitations or challenges. Individuals with back pain or injury often have difficulty standing, sitting, reaching, lifting, carrying, running, driving, walking and jumping, according to the National Ag Safety Database.

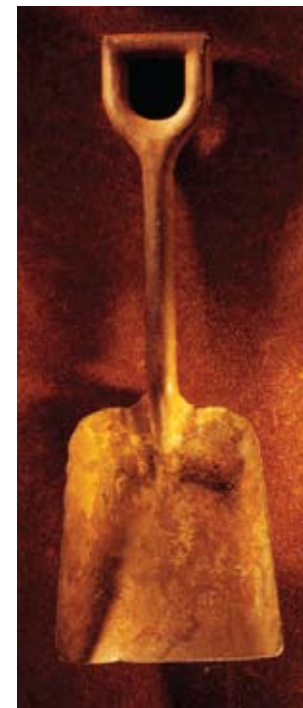
## Prevention

If prevention is key, what steps can be taken to prevent, reduce, or eliminate back pain and chance of injury?

Regular exercise is one of the most important, preventative steps. When the back is forced to carry extra weight, from one being overweight, additional strain is added, increasing chances of strain and eventual injury. With regular exercise, extra weight may be lost, the back becomes stronger, and proper posture is easier to maintain. Proper posture reduces pressure to the back that can lead to fatigue and eventual injury.

The American Academy of Orthopaedic Surgeons recommends the following exercises to minimize problems resulting from back pain.

**Wall slides:** Stand with your back against a wall and feet shoulder-width apart. Slide down to a crouch with knees bent to about 90 degrees. Count to five, slide back up the wall.



Repeat five times.

**Back leg swing:** Stand behind a chair with your hands on the back. Lift one leg back and up while keeping the knee straight. Return slowly. Raise other leg and return. Repeat five times on each leg.

**Leg raises:** Lie on your back with arms at your sides. Lift one leg off the floor. Hold leg up for a count of 10 and return leg to the floor. Repeat with other leg. Complete five repetitions on each leg. If this is too difficult, keep one knee bent and the foot flat on the ground while rising opposite leg.

Adopt healthy work habits in your daily routine. Plan body movements to avoid unnecessary bending, twisting, and reaching. Listen to your body, and rest if needed. Minimize falling haz-

ards and reduce stress. Lowered stress levels allow your body to stay relaxed; tense muscles are more prone to injury.

## Around machinery and animals

Adding steps made with non-slip materials or topped with non-slip tape to machinery can assist with safer mounts and dismounts. Automatic hitches, gate openers, and cattle guards reduce the number of mounts and dismounts onto equipment.

Equipment cushions can be modified or replaced to accommodate existing back conditions. Newer seat cushions often have adjustable lumbar supports, arm rests, and thigh support to better distribute weight. Swivel seats in tractors allow operators to turn comfortably without wrenching or twisting the back.

When feeding a small number of animals, use a cart or wheelbarrow to haul feed and

bags instead of carrying them. Various over-the-counter back supports are available; check with your doctor to see which, if any, would provide the best support for tasks. Use handle extenders and long-handled tools to increase leverage and reduce bending.

Using proper body mechanics and lifting techniques, such as bending your knees and lifting from your legs instead of your back, reduces the chance of back injury. Make sure to slowly straighten legs only after the load is close to your body. Turn your entire body rather than twisting from the core. If trying to maneuver a heavy load, ask for help; when possible, take more frequent, lighter loads.

For more information on Wyoming AgrAbility, call toll-free (866) 395-4986, e-mail [agrability@uwyo.edu](mailto:agrability@uwyo.edu), or visit [www.uwyo.edu/agrability](http://www.uwyo.edu/agrability) on the Web.

