



# Managing and Preventing Back Pain in Agriculture

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## Problem: Pain in the BACK

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### Back Pain Facts

- 37-41% of farmers report low back pain (Davis & Kotowski, 2007)
- Back pain impacts adults AND youth. In a study of 2536 high school students, 19.1% of teen farmworkers reported back pain compared to 12.4% of their non-farmworker peers. (Shipp et al., 2007)
- Back pain is the most common cause of job related disability (Hoy et al., 2012)
- On average, health care costs for individuals with low back pain are 60% higher than individuals without back pain (Luo et al., 2003)
- Back pain can be prevented

### Risk Factors Associated with Back Pain in Agriculture

- Lifting objects greater than 50 pounds
- Repeatedly lifting and carrying light objects
- Working in awkward positions
- Poor sitting and standing posture
- Continuous time spent in one position—for example, remaining seated in tractor during harvest
- Vibration from machinery and equipment such as tractors and trucks
- Injuries associated with unsafe work conditions
- History of previous back injury
- Personal factors such as age, weight, nutritional status, smoking, alcohol use, etc.



### Back Pain Prevention

Discover general guidelines for preventing and reducing back pain on the farm. Learn simple tricks that can be implemented while working in your shop, while in the tractor, or even while working with livestock.

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# Back Pain Prevention

## General Guidelines

- Avoid prolonged, repetitive tasks
- Alternate between heavy work and light work tasks
- Take rest breaks **HOURLY**
- Commit to a routine exercise and stretching program
- Strengthen your CORE
- Maintain a healthy diet and body weight; extra pounds place stress on your back
- Before starting a task, consider how it could be done differently to avoid poor posture and risky lifting
- Install swivel seats and wide, angled rear view mirrors in tractors to avoid twisting trunk
- Avoid tugging and pulling connections while hitching equipment; use telescoping and self-latching tongues to reduce stress on the back
- Use a knife to cut bale strings instead of jerking them off of the bale
- Use carts when transporting materials
- Automate and use labor saving tools to complete tasks (Ladders, carts, wheel barrows, augers, skid steers)
- Stay positive!! Stress and anxiety have been associated with back pain



## Preventing falls on the Farm

- Clean dirt, oil, grease, and manure from tractor steps
- Mount anti-slip tape on steps (tractors, combines, ladders, etc.)
- Install extra handles on tractors for increased stability while stepping

## When Working With Livestock

- Stand with a wider stance to withstand sudden movements of animals
- Get help when needed
- Use a chute to stabilize animals

## In Your Shop

- Keep items at waist level
- Industrial work seats provide back support while working in awkward positions
- Install rubber mats in frequently traveled areas to reduce shock to the body
- Wear high quality, shock absorbing shoes
- Keep flooring clean to reduce the chances of slipping and falling



*Back injury prevention starts at a young age. Using carts when moving heavy loads is a great way to reduce stress on your back.*

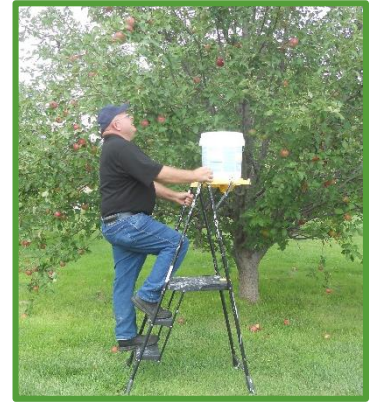


# Maintaining Good Posture

Stooping and slouching places strain on your muscles and ligaments. Maintaining good posture while standing and sitting is a great way to prevent back pain while working on the farm. Proper posture prevents abnormal wearing on joint surfaces, decreases muscle fatigue, prevents muscle strain, and decreases stress on the ligaments in the back.

*How do I stand correctly?*

Stand with your feet shoulder width apart, bearing most of your weight on the balls of your feet. Pull your shoulders back and stand straight and tall while tightening your stomach muscles. Your earlobes should be in line with your shoulders, avoid pushing your head forward. Transfer your weight from your heels to your toes or from one foot to the other if standing for long periods of time.



## Lifting 101

### Lifting guidelines:

- Loads should be as light and compact as possible
- Ask for help when items are too heavy or oddly shaped
- Plan your lift. Know how much the object weighs and where you plan to move the object.
- Remove any clutter and any tripping hazards from your path
- When lifting an object do not bend or reach forward. Move unneeded objects out of the way and step close to the object being lifted
- Keep objects close to your body while lifting
- Do not twist the trunk while lifting an object, instead rotate your body by moving your feet
- Avoid lifting and carrying objects for extended distances
- Avoid unnecessary lifts
- Use mechanical devices to lift heavy objects when possible



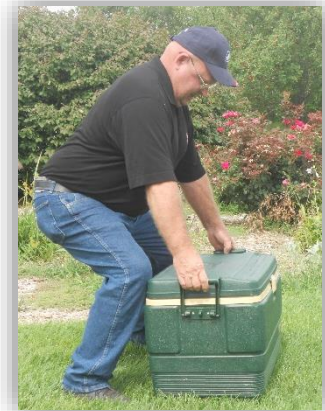
### Proper Lifting Technique



1. Test the weight of the object before lifting



2. Position yourself close to the object being lifted; get a firm footing and grip on the object



3. Bend at the knees and lift with your legs—REMEMBER, keep your back straight

# Stretching and Exercise

Stretching decreases back pain by improving performance in activities, improving balance and increasing blood circulation.

Refer to Nebraska AgrAbility's Farmer Daily Stretching Program for a detailed list of daily stretches

(<http://agrability.unl.edu/home>).

Exercise is another way to prevent back pain. Having strong abdominal and back muscles helps with maintaining good posture. Also, exercise is a great way to shed those extra pounds that are placing stress on your back. Refer to University of Arkansas: Exercise for Low back Injury and Prevention

(<http://www.agrability.org/Documents/back/FSFCS38%20Low%20Back%20Injury%20Prevention.pdf>)



\*Refer to your doctor, physical therapist, or occupational therapist before beginning an exercise regimen.

## Resources

### Nebraska AgrAbility

800-471-6425 (Toll free)

402-462-3031 (Hastings, Nebraska)

[neagrability@ne.easterseals.com](mailto:neagrability@ne.easterseals.com)

<http://agrability.unl.edu>



### Helpful Websites:

- Farming with Back Impairment: <http://www.agrability.org/Documents/back/Plowshares26-Back.pdf>
- Tips for Ranching and Farming with Back Pain and Injury: [http://www.uwyo.edu/agrability/fact\\_sheets/backpain.pdf](http://www.uwyo.edu/agrability/fact_sheets/backpain.pdf)
- Preventing Low Back Pain in Agriculture: <http://njaes.rutgers.edu/pubs/publication.asp?pid=FS661>
- Posture for a Healthy Back: [http://my.clevelandclinic.org/healthy\\_living/back\\_health/hic\\_posture\\_for\\_a\\_healthy\\_back.aspx](http://my.clevelandclinic.org/healthy_living/back_health/hic_posture_for_a_healthy_back.aspx)
- National Farm Medicine Center: <http://www3.marshfieldclinic.org/NFMC/>

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