



The Agricultural Health  
and Safety Network

# SAVE YOUR BACK

PREVENTION OF AGRICULTURAL RELATED BACK STRAIN AND INJURY



[aghealth.usask.ca](http://aghealth.usask.ca)



# SAVE YOUR BACK

Dear Farm Family,

I am glad that you have picked up this resource because you have chosen to actively pursue safety for your family. As a society we now live longer and we need our backs to last longer. This resource will help you make your back last a lifetime.

While living in rural Saskatchewan I strained my back on a regular basis and observed while others did terrible things to their backs as well.

- No one exercised in winter
- No one walked
- No one stretched
- Everyone worked hard especially during busy seasons

Although I frequently heard my father's voice: "Lift with your legs" I still did far too many of the wrong things. We worked hard and although rest was to come later, it never happened. We never took a break until the season was over.

I began seeing a chiropractor and after being treated for a while he told me that this would be a chronic issue for me if I did not learn to exercise. Ultimately I had to

admit that he was right and follow his advice.

Keeping your back in great shape poses additional challenges when you live in rural and remote Saskatchewan communities where health care professionals may not be abundant or exist at all. You may have to rely on exercise and good judgment to protect your back.

We want you to be inspired to take care of your back and encourage all family members and workers to take care of their backs. Make regular exercise all year round your new good habit. Your back will thank you.

Most of the suggestions to care for your back in this resource don't require an additional financial commitment to carry out, just discipline.

Take care of your back. We want you to do the job you love as long as you want. Even if your back feels great now, keep it that way. Preventing back injuries is a lot easier than correcting them.

Bonita





# Why do We Promote **Back Safety?**

## What is Ergonomics?

Ergonomics is a science that deals with designing and arranging things so that people can use them easily and safely.

### What are the objectives of this resource?

- To educate farmers in ergonomic best practices
- Back strain and injury prevention
- Improvement of the current condition of the backs of Saskatchewan farmers
- Improve the quality of life in rural Saskatchewan
- Reduction of the cost due to injury and time off work

The purpose of this resource is to present useable information to Saskatchewan farm families, workers and the agricultural industry by keeping farmers working rather than tending to injuries and strain.

## The Research Connection

The Canadian Centre for Health and Safety in Agriculture has a history of over 25 years of health and safety research. The Agricultural Health and Safety Network is the link between CCHSA research and rural Saskatchewan distributing health and safety information.

A new five-year study is in progress to examine how to prevent aches and pains from developing into more serious, long-term injuries for farmers and agricultural workers in Saskatchewan. It will assess work exposures and determine patterns of vibration, awkward posture, and manual handling as well as asking the following questions:

- What is the prevalence and degree of low back disorder-related pain and disability experienced by Saskatchewan farmers?
- Are farmers able to access health care?



## Are you at risk for back pain?

### Consider the following questions:

- Do you frequently bend and lift?
- Do you have to lift and carry in a hurry?
- Do you exercise regularly?
- Are you overweight?
- Do you smoke?
- Do you operate machinery?

# Repetitive Strain Injury (RSI) Prevention

RSI includes injuries to the musculoskeletal and nervous systems that may be caused by repetitive tasks, forceful exertions, vibrations, mechanical compression, or sustained awkward positions.

**RSI is preventable and should not go unrecognized on the farm. Use the following healthy moves in your farming operation:**

## Good posture

- Awkward reaching, position, or angle of the body can create a problem.
- Shift positions frequently when you have to perform a task standing or sitting for a long period of time.
- Work near your body to prevent awkward positions.
- Take frequent breaks.
- If standing for a long time place your foot on a stool to maintain the normal curve of your back.

## Caution when lifting

- Stay close to the object
- Bend at the knees when lifting
- Keep your back straight and lift with your legs
- Do not twist your body while lifting
- Recruit help if the item is too heavy
- Don't use excessive force
- Avoid sudden jerky movements
- Avoid lifting above shoulder height

## Caution when operating machinery

- Support the curve of the lower back
- Take frequent breaks to stand up and walk
- Where possible, avoid twisting for long periods of time (take micro-breaks to straighten out frequently)

## Stretch and stay warm

- Cold muscles are more susceptible to injury and strain from over use.
- Keep your hands and body warm.

## Reduce stress and listen to your body

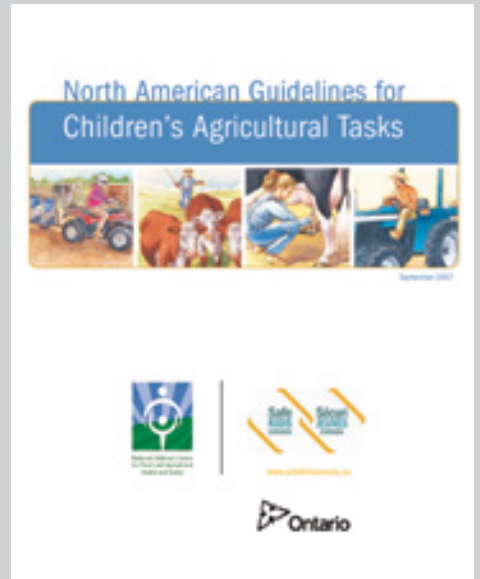
- Take regular breaks to prevent RSI
- Stress increases your risk of RSI
- Minimise stress by exercising three times a week for 30 minutes
- Stop smoking, and reduce caffeine intake
- Don't ignore pain as it can reduce your range of motion, restrict activities or result in surgery. See your doctor.



# MACHINERY OPERATION & Your Back

Whole body vibration is a risk factor for farmers. The following are also ergonomic risks in agriculture:

- Bumps and jostles or driving any equipment hitting rough terrain that jerks takes a toll on the body.
- Machine idling. The machine itself may idle enough to cause a vibration affecting the body.
- Stationary joints. Not moving for long periods of time in any position.
- Static postures are harder on disks in the back. These include standing or sitting still for long periods of time.
- Combinations of these risks such as sitting for long periods in a vibrating seat are also a concern.



## Children & Lifting

The North American Guidelines for Children's Agricultural Tasks (NAGCAT) was developed for parents in the farming community as a guide to safe farm activities for children. For more information on appropriate tasks for children go to the NAGCAT guideline available at [www.safekidscanada.ca](http://www.safekidscanada.ca)



## Every farming operation has a different set of risks. Think about the following questions:

**What activities exist in your work-place that could cause back injury?**

**What can be done in your work area to minimize risks for back injury?**



# Hazard Identification



How do we manage hazards to our back on the farm?

1. Identify the hazard – Use a checklist or a Farm Safety Audit (The Network has one available).
2. See if you can reduce the safety hazard.
3. If it is not possible to eliminate or substitute, change the design or change how you do the job.

Although the most effective control action is to eliminate the hazard, sometimes one must substitute a different method to decrease the hazard to the back. In some situations changing a piece of equipment or repairing it may be necessary.

## Ask yourself the following questions:

1. Can the hazard be eliminated?
2. Is there a different product or process that I can do on my farm to decrease the risk to my health?
3. How could a process, building, or machine can be altered to reduce the hazard?
4. Is there a different way you can perform a task safely to reduce the health hazard?



### Prevent strain from heavy lifting.

Consider other equipment that you could use to take the brunt of the heavy lifting off your back. Perhaps one of the following would be an option:

- Wheelbarrows • Overhead hoists • Forklifts
- Front end loaders • Hand trucks
- Rolling carts or dollies (rotating or with jacks)

### Lifting Objects from Ground Level

1. Raise bag upright
2. Kneel onto one knee and rest bag against kneeling leg
3. Pull the bag up the leg
4. Transfer bag over to the leg that is bent at 90°
5. Stand up
6. Carry the load with back upright

# Take a Stretch Break!

Sitting or standing for a long time can tighten muscles. Take frequent breaks to stretch these muscles. Stretching shouldn't hurt. Move slowly and gently stretching each side twice.

**CAUTION:** If you experience any pain, numbness or tingling, avoid that exercise and consult a health care professional.

**NECK** Stay within a comfortable range.



## SHOULDERS

Move arms slowly and hold.



## CHEST

Keep your thumbs up.



## WRISTS

Pull very gently on fingers.



## BACK

Place hands in back pockets and push hips forward.\*



\*This stretch may not work for everyone. If you feel pain, numbness, or tingling in the back or legs, avoid it and consult a health care professional.



## HIP FLEXORS

Think about bringing shoulders back and hip forward.





# Back Injury Prevention

## Basic Steps of Safe Lifting and Handling

1. Take the time to consider the size of the load. If it is too heavy or awkward get help. Check for proper footing and space to move.
2. You should have good balance, feet shoulder width apart and one foot beside and the other foot behind the object to be lifted.
3. Bend with your knees. Keep your back straight, but not vertical. Tuck in your chin to straighten the back.
4. Use the palms of your hands and your fingers to grip the load. This grip is more secure. Again, tuck in your chin to make sure your back is straight before beginning to lift.
5. Use your body weight to begin the load movement, then lift by pushing up with the legs.
6. Keep the arms and elbows close to the body while lifting.
7. Carry the load close to your body. Don't twist your body while carrying a load. If you have to change direc-

tion, shift your foot position and turn your whole body.

8. Look in the direction that you are heading.
9. Bend your knees to lower the object. Don't bend over or stoop. Place the load on the edge of the shelf and push it into position.

## Posture when driving equipment

- Adjust the seat so that your knees are level with your hips.
- Sit with your full back supported against the seat. Be sure to support the curve of your lower back
- Don't slouch. Sit up straight. Shoulders should not be rolled forward. Elbows bent with hands on steering wheel.
- You shouldn't have your arms fully extended to reach the steering wheel
- The top of the steering wheel should be below your shoulders.
- Shift your position frequently.
- Always step down from a tractor or

other large equipment facing the tractor with a good grip on hand rails. Never jump down.

## General tips for preventing back injury on the farm

- Walking breaks – frequently is better than longer
- Get out of your seat – risk factor – whole body vibration and prolonged sitting
- Climb down from tractor cab – never jump
- If you are forced to have long vehicle time periods – fidget, shift, move arms, shift weight around, etc.
- Neutral – avoid awkward postures –if you can't, keep moving
- Always rotate repetitive tasks
- Always inspect work areas for slip, trip and fall hazards
- Wear appropriate footwear with support to minimise stress on joints and the spine
- Know your limitations

## Limitations:

If you have a back injury you may experience limitations in any one or more of the following activities: Standing, carrying, bending, jumping, sitting, pushing, stooping, running, reaching, pulling, crawling, driving, lifting, climbing, kneeling, walking.





# Daily Exercises

## for Fall Prevention for Older Farmers

Strength and balance training can help prevent falls. Here are a few examples of exercises that can be done very day to prevent falling.



### Sitting to Standing Position

Why?

**This exercise helps with leg strength.**

- Sit, then stand and hold for 5 seconds.
- Do at least 10 times.

### Tandem Walk

Why?

**This exercise helps with balance.**

- Walk a straight line with one foot in front of the other.
- Do this every time you have a chance down a hallway or on level ground.



### Leg Extension

Why?

**This exercise helps with leg and ankle strength.**

- While sitting, straighten one leg at a time and hold for 5 seconds.
- Do at least 10 times on each leg.
- When you feel comfortable, add an ankle weight or a bag of rice.





# Good Posture



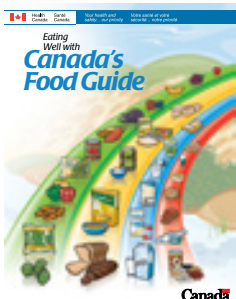
## Keeping your back IN TIP TOP SHAPE

Even if you are tired at the end of the day, spend time decompressing, exercising and perhaps go for a short walk. Aim for 10,000 steps a day. A pedometer is an inexpensive way to measure how much walking you do in a day. Try to develop active hobbies that you can do frequently such as hunting, curling or other sports.

Being in poor physical condition makes you even more prone to injuries while performing agricultural tasks. Have a check up and get your doctor's advice in the following areas:

**Exercise:** Walking and other aerobic exercise has been shown to treat and prevent back pain. Start exercising gradually. Do arm exercises that will relax and strengthen your neck and shoulders.

**Excess weight:** This is hard on your back, especially belly fat. Eat a balanced diet. A good place to start is the Canada Food Guide. Remember: Everything in moderation.



**Canada Food Guide:**  
<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>

Awkward positions and reaching create problems.

**If there is no other option, take frequent breaks.**

### Exercise

As a general rule, people who exercise and are in condition are less likely to suffer back pain caused by muscle strain. Regular exercise is key.

### Consider these tips:

- Walk or exercise regularly.
- Consult your health care provider if you are recovering from an injury and only do the exercises that they recommend.
- Warm up before exercising.
- Work into it. Don't initially over exert yourself.







# What is holding you back?

It is your responsibility for your safety on the job. With all the educational resources out there, there is no excuse not to use best practices and to teach them to the next generation. Teach them to slow down and think about the task at hand, and of course, practice what you preach! Internalizing good habits will help your back last a lifetime.



Information provided in this booklet is general in content and should not be seen as a substitute for professional medical advice. Concerns over RSI, personal back safety, or other medical conditions should be discussed with your doctor.

#### REFERENCES

- Canadian Centre for Occupational Health and Safety. [www.ccohs.ca](http://www.ccohs.ca)
- Preventing Falls for Older Farmers. Australian Centre for Agricultural Health and Safety. [www.aghealth.org.au](http://www.aghealth.org.au)
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*Thank you to Les Leuschen  
for posing for our stretching and exercise pictures.*



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