BACK TO BACKS

A Guide to Preventing Back Injury
Bad Backs Are Bad Business

Most Americans will have a back injury sometime during their lives. And many hours at work, home, and play are lost to bad backs. That means back injury costs both you and your employer time and money. Simple ways to prevent back injury include the following:

- Learning proper lifting and material handling techniques
- Maintaining a healthy body weight
- Strengthening neglected back muscles
- Adopting good posture habits: Maintain your back’s three natural curves at work, home, and play.

Back injuries are one of the most common job-related injuries. And even more back injuries occur at home or at play.

Back Facts

The pain and inconvenience caused by back problems cannot be measured. But we can figure costs in dollars and cents.

- Back injuries cost employers billions of dollars each year.
- Employees spend hundreds of millions more visiting doctors for their back pain.

With slowed production, increased turnover, medical bills, and pain, bad backs are bad business for you and your employer.
**Prevention—The Best Insurance**

By working together—back to back—you and your employer can prevent back injuries. Keeping your back healthy and keeping you on the job takes a team effort. Management is committed to helping reduce back injuries at work. To do this, they’ll teach you good lifting and material handling techniques. But back safety is a shared responsibility. It requires your cooperation at work, home, and play.

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**You Are the Key**

Protecting your back around the clock is your best insurance against back injury. You are the only one who’s around to do it, both on and off the job.

**First step: Keep your back in mind.** It’s amazing how often most people lift the wrong way. This booklet will show you proper lifting and material handling techniques to use at work, home, and play. It will also show you other ways to be kind to your back 24 hours a day. They include keeping your back in shape and maintaining good posture.

**Think ahead.** One of the key changes you can make is to plan before lifting. That way, you can be aware of hazards before you lift. Then make sure the hazards are removed by alerting your supervisor. You and your employer are the back injury prevention team for your job.
Anatomy of a Healthy Back

The spinal column supports the back. It is made up of 24 vertebrae (back bones) stacked one upon the other. These vertebrae are separated by soft disks. The disks act as cushions and shock absorbers. They also allow the vertebrae to move.

Many people are surprised to learn that the back is supported by abdominal (stomach) muscles, together with muscles and ligaments along the spine. A healthy back is properly aligned. This means its three natural curves (cervical, thoracic, and lumbar) are in their normal, balanced position. In a healthy back, strong muscles help support these curves.

The Lower Back

Most of our body weight falls on the vertebrae of the lower back (the lumbar curve—L1 through L5). This makes the lower back prone to injury. Weak abdominal or back muscles can rob the spine of the support it needs. So can poor posture. A sudden twist or a careless lift can injure the lower back. To help ensure a healthy back, do the following:

• Learn good lifting and material handling techniques.
• Keep all your body’s muscles strong.
• Watch your posture.
The Anatomy of Proper Lifting

Lifting: A Common Cause of Injury

The right way: Bending with your knees and hips helps maintain your back’s curves. Letting your legs do most of the lifting takes pressure off your spine. Holding the object close to you when you lift also reduces the pressure on your spine.

The wrong way: When you bend with straight legs and a rounded back, you lose your back’s three natural curves. Lifting this way makes your back do most of the work. And the farther you lean forward when lifting an object, the more pressure you put on your spine.

How to Lift Properly

1 ▶ Get a firm footing.
   Keep your feet shoulder-width apart, and point your toes out. This gives you a stable base.

2 ▶ Bend your knees.
   To get your chest closer to the load, bend at your knees and hips instead of at your waist. Be sure to maintain your back’s three natural curves.

3 ▶ Tighten stomach muscles.
   Stomach muscles help support your spine. So tightening them as you lift lessens the stress on your spine. Train muscle groups to work together.

4 ▶ Lift with your legs.
   Let the powerful leg muscles do the work of lifting, not your weaker back muscles. Maintain your back’s three natural curves.

5 ▶ Keep the load close.
   Hold the load close to your body. The closer it is to your spine, the less stress it puts on your back.

6 ▶ Keep your back upright.
   Whether you are lifting or lowering a load, keep your back as upright as you can. That way, you don’t add the weight of your body to the load. Avoid twisting; it can cause injury.
Start with Conditioning

It’s common for people to find themselves stressed, overweight, and prone to backaches. Muscles weakened by disuse add to the back’s workload. This makes the back prone to pain and injury. Learning to reduce stress, eating right, and getting regular exercise can help relieve back pain. You’ll be starting on the road to enjoying a happier, healthier lifestyle. You’ll look better, too!

Reduce stress. Muscle tension that builds up during a stress-filled day affects your spine. Learn how to relax and unwind. Organize your daily routine to make it easier on both the mind and body.

Exercise regularly. Most back pain can be traced to a lack of exercise. Condition your muscles to work as a team. Start a regular exercise program.

• Strengthen the muscles in the back, upper legs, and especially the stomach. This will increase your spine’s support. Strong stomach and back muscles help maintain the back’s three natural curves.
• Increase flexibility while you’re building strength. Tight, shortened muscles can increase your chances of back injury. Stretching exercises make muscles more flexible. They also make motion easier. And stretching is a good way to warm up before more vigorous exercise.

Maintain a healthy weight. Excess weight puts added stress on the back. Losing extra pounds and maintaining a healthy weight can help. A steady exercise program is the key to weight management. It can also help you look better and get more work done.
Back-Conditioning Exercises

Do these simple exercises each day to help keep your back strong, flexible, and properly aligned. Warm up for 2 to 3 minutes by doing jumping jacks or jogging in place. Some of these exercises can be done at work. Be sure to consult your doctor before starting any exercise program.

Pelvic Tilt
To strengthen the stomach muscles, stretch back muscles, and improve posture:
1. Stand with your back against a wall.
2. Tighten stomach and buttock muscles.
3. Tilt your pelvis slightly until your lower back flattens against the wall.
4. Hold for 6 counts.
5. Relax.
6. Repeat 5 times.

Wall Slide
To strengthen the upper leg muscles:
1. Stand with your back against a wall.
2. Move your feet about 12 inches from the wall, shoulder-width apart. Bend knees to slide to a “half-sit.”
3. Hold for a count of 5. (Over time, work up to holding for 1 minute.)
4. Slowly slide back up.

Half Sit-Ups
To strengthen the stomach muscles:
1. Start as shown.
2. Slowly raise only your head, neck, and shoulders.
3. Touch knees.
4. Hold for 5 counts.
5. Slowly return to starting position.
6. Repeat 5 times.

Elbow Props (do only if your doctor says it’s safe)
To help maintain the normal lumbar curve:
1. Lie on your stomach as pictured.
2. Prop on elbows for 10 to 20 seconds.
3. Return to starting position.
4. Repeat 5 times.

Overall Conditioning
Physical activity, such as brisk walking or swimming, can also help keep your back in shape.

You’ve started on the right foot by bringing your back and body to work in the best possible condition. Help them stay that way by lifting and handling materials the right way.
Material Handling—Think Before You Lift

Before You Lift
To handle materials safely, first think about how you'll lift the load. Plan each step before lifting. Even repetitive jobs can be thought through before you do them.

Size up the load. How much does it weigh? Can you manage it? Give the load a small push to get a feel for its weight. You don’t want any surprises! If it feels OK, go ahead and lift it.

Get help. If the load is too bulky or heavy for you to safely lift alone, get help. Don’t hesitate to ask someone for a hand. A moment’s help could save you from days of disability.

Find a better way. What if no one is there to help? Or what if the job is too big even for two? Arrange to get mechanical help. This could mean using a pushcart, hand truck, wheelbarrow, or forklift.
When You Lift

Always use proper lifting techniques. Do this whether working alone, as a team, or with a mechanical aid.

Lift it properly. When lifting, follow these steps.

1. Get close to the load and grasp firmly. Hug it!
2. Maintain your back’s three natural curves as you use your strong leg muscles to lift the load.
3. Set the load down smoothly.

Lift as a team. When team lifting, pick a leader to call the signals. The leader should direct the team so you all lift at the same time, walk in step, and lower the load together. All team members should use proper lifting techniques.

Use a mechanical aid. Use good lifting techniques to load mechanical aids. When you can, push rather than pull.

To unload, use the good lifting techniques you’ve learned, but in reverse.
Solve ongoing problems.
Don’t accept problems as being “the way things are.” See them as problems. Then decide how you can avoid them in the future. Think through your job tasks. Do you really need to bend and reach so much? Can you think of a smarter way?

Solve high-load problems.
Lifting something that’s above the height of your shoulders can be hazardous. Test the weight by pushing up on the load. Get as close to the load as you can. You’ll want to slide the object down your body, close to the spine. Plan to “lift down” the same way you lift up—the right way.

Before You Lift
As part of planning your lifting tasks, try to predict any problems that may come up.

Check the pathway. Look for things that could get in your way—underfoot and overhead. Check for spills, lighting, traffic (people and machines), stairs, bumps, and slopes. Choose a clear route over the flattest surface, even if it takes a little longer.

Material Handling—Think Before You Lift
When You Lift

Look for simple ways to make lifting, carrying, and unloading easier on you and your back.

Clear the pathway. Make sure any hazards you spotted have been removed. See that the area is well-lighted. Wait until traffic clears. Then transport the load. And set it down in the proper place.

Unload carefully. Plan where you can set the load down safely. Pick your spot carefully so no one has to move the load again.

Lift less, and enjoy the rewards. Look around your workplace. How could you reorganize to limit how much you have to lift and how far you have to carry it? Discuss with your supervisor and coworkers ways to make lifting easier. Then include these safer methods in your daily routine.
More Handling Tips—Thinking Along the Way

A key part of material handling is carrying the load from one place to another. Proper transport techniques, like proper lifting techniques, can make life easier on your back. Remember to push rather than pull, avoid twisting or too much bending, wear the right shoes, and use mechanical aids when you can.

Push, don’t pull. You can push more than you can pull. And you’ll be less likely to get back strain.

Don’t twist when you lift and carry. Avoid twisting or too much bending when you set down your load.

Watch your footing. Wear the right shoes for the task. Watch for obstacles. Take small steps. Go slowly.

Use mechanical aids. Why put a heavy load on your back and increase the risk of injury? Hand trucks and forklifts can help you avoid the chance of a strain or injury. So plan ahead. Arrange to have aids on hand when you need them. When loading or unloading mechanical aids, remember to use proper lifting techniques.
Good posture means having your back’s three natural curves in their normal, balanced position. This helps give your back the support it needs. Whether at work, home, or play, avoid staying too long in any position that puts stress on your back. Follow the posture tips below for sitting, standing, and sleeping.

**Sitting** can be more stressful for your back than standing or walking. These tips can help:

- Don’t sit too long. Get up, stretch, and walk around from time to time.
- Have back support to help you sit up straight. If your chair does not provide that support, use a pillow or special back support.
- Work at a comfortable height to reduce stress on your back. Adjust your chair height so that your knees are at or slightly below the level of your hips.

When working at your desk, you should not have to slouch or reach.

**Standing** can be hard on your back, too. Following these steps can help relieve the stress:

- Check your posture by thinking of your ears, shoulders, hips, and ankles as a series of dots. Now, adjust your body to connect the dots in a straight line.
- To help maintain your back’s three natural curves while you stand, place one foot higher than the other—at a comfortable level.
- Switch feet each half hour or so.

**Sleeping** rests the back. When you’re lying down, your back doesn’t have to support your body weight.

- Use a mattress that supports your back’s three natural curves.
- Sleep on your side with knees bent, or on your back with knees raised on a pillow.
Back-Saving Solutions

Now you know how your back would like to be treated. Think about everyday situations and personal habits that make life hard on your back. Then be on the lookout for better ways to give your back the treatment it deserves—at home, work, and play. Only you can be your back’s best friend!

For driving, adjust your seat so that knees are bent. Keep knees at or just below hip level. Support your lower back with a cushion or rolled-up towel.

Don’t strain to lift or carry a heavy load when it can be split into two (or more) smaller loads. Take the time to be safe.

Lifting and unloading are easiest at waist level. Use a table or pallet when you can.
A Healthy Back: Good for Everybody

Celebrate! You and your employer are working together to make your life at work, home, and play safe for your back. Management is committed to helping you protect your back and to keeping you on the job. Teamwork and shared responsibility can make this happen. Together, we can ensure productivity, prevent lost work time, and better enjoy life. When backs are healthy, we all win.

It's Up to You

Each move you make, on and off the job, depends on your back. So keep your back in mind throughout your day—while you sit, stand, lift, and carry. Remember what you learned about lifting and handling materials. And think before you move.
Back Basics

• You and your employer share responsibility for preventing painful and costly back injuries.
• You can help keep your back strong and healthy by having good posture, reducing stress, and following a weight management and exercise program.
• Lift the easy way—the right way.
• Think about how you’ll handle materials before handling them. Use your head to save your back.
• Work with your company and coworkers to make your environment and activities safer for your back.