BACK CARE AND SAFE LIFTING

One very important reason to follow safe lifting practices is to protect your back. Unsafe lifting can either be an immediate harm or cause problems over a period of time. Either way, lifting can result in serious back problems.

The spine is made up of many small bones called vertebrae. In between each vertebra is a disc that acts like a cushion between the bones. When you are young, there is plenty of fluid that lubricates each disc. The older you get, the stiffer and rigid the discs become. You don’t necessary notice and change in your discs as you grow older because there are no nerves within the discs. As your discs become weakened from pressure, they can rupture. When this happens, the jelly-like substance inside of the discs squeezes out. It puts pressure on the nerve in the spinal column, creating pain.

PRESSURES OF LIFTING CORRECTLY

When standing straight, the back supports 70-80% of body weight.

Example: a 200 pound person’s back supports 160 pounds.

Bending at the waist, the weight the back supports increases 6 times (160 pounds multiply by 6 = 960 pounds)

The spine acts as a fulcrum of the weight.

Lifting a weight of 45 pounds while bending multiplies the weight, the back mus lift by 6 (45 pounds multiply by 6 = 270 pounds)

This 200 pound person’s back is supporting 1,230 pounds. (960 pounds + 270 pounds = 1,230 pounds)

UNDERSTANDING THE CYCLES OF PAIN

Your back is very prone to muscle tension. When you get a muscle spasm, you will know by the jabbing pain. You also may feel a knot in the muscle. This is the muscle contracting. It is the body’s natural way of preventing more damage to your spine. The spasm choking off the oxygen and circulation. Lactic acid and other waste products build up in the muscle. The muscles get more still and shorten. This causes pressure on the spine. The spine becomes locked and you can no longer move freely.
HOW TO BREAK PAIN CYCLES

It takes effort to relax muscles in this cycle. The body tends to tense up even more from pain. To break the pain cycle:

- Find your comfort zone and hold your body in that position in whatever activity you do. Keep in mind good posture. Stand and sit erect with your feet planted firmly on the ground. Keep the hips tilted slightly forward with the abdomen and buttocks firm.

- During the first 24 hours, ice and rest are the best ways to take care of a muscle spasm. Apply an ice bag for 10-15 minutes. Repeat once or twice over the next 8-12 hours. Heat can be used after the first 24 hours. Never use a heating pad for more than 15-20 minutes at a time.

- Medication may help relax painful muscles. Aspirin and Ibuprofen are the best over-the-counter, anti-inflammatory drugs. Use prescription muscle relaxants or sedative carefully. They actually disrupt the relation and sleep. Alcohol or illegal drugs only make pain temporarily and prolong the pain cycle.

- Relax your mind. Sit or lie comfortably. Tighten each muscle for the count of 5. Relax and breathe deeply after tensing each muscle.

- If you continue to experience pain that cannot be relieved with changing positions, ice, massage and relaxation, consult your doctor.

REMEMBER

- Plan each lift before you start, including the path you will be travelling.
- Size up the load. Can you carry it or do you need help?
- Get any needed equipment to help transport the load – including a hand truck, pushcart, forklift or wheelbarrow. Use snug-fitting gloves to help you grip the load you’re about to lift.
- Do simple stretching and bending exercises before you lift.
- Bend your knees and keep your back straight as possible.
- Crouch, don’t squat.
- Get close to the load, and hug it to your body before lifting.
- Keep your head, shoulders, and hips in a straight line.
- Reverse the steps for lifting when setting the load down – keeping the pressure on your arms and legs, not on your back.
- Prevent back strains by not bending at the waist to pick up any object.

GET PHYSICALLY FIT

Keeping your body strong and flexible is your best insurance against back injury.

- Do strengthening exercises to build support for your spine. Concentrate on the exercises on the other side of this pamphlet. They strengthen the abdomen and lower back.

- Move your body on a regular basis. Whole body exercises, like brisk walking, bicycle riding, and swimming improve circulation and help tone all the muscles in the body. Exercising 3 times a week for 30 minutes a session will help you stay in shape.

- Extra weight can place more stress on your back. When you stay at your proper weight, you take much of the strain off your back.

- Stretch to increase flexibility. Get in the habit of stretching every day. Keep track on the chart below.

### Chart

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BACK CARE & SAFE LIFTING

BEFORE YOU LIFT

- Always warm up your body before you lift any load. This is a good way to prevent muscle strains and pulls.
- Stretch your back with upward reaches and continue to loosen tight muscles with simple side and back bends.

ELIMINATE THE LIFT

Is there another way to move the object? No matter how well you prepare, lifting still puts a strain on your back. Here are some suggestions on how to curb additional strain and finish the job.

- Use mechanical assistance whenever possible.
- Roll, push, or pull the object to its destination.
- Redesign the task to eliminate lift.

SPECIAL LIFTING SITUATIONS:

REACHING FOR A LOAD

- Get close to the load with a sturdy ladder.
- Slide the load to the edge and down to your waist.
- Step down, bending your knees.

LONG OBJECTS

- To carry long objects like lumber, pipes or a ladder hoist the object up to your shoulder.
- Hold the front end up as high as possible so other employees won’t be stuck as you round a blind corner.
- When two people carry long objects, they should each place the objects on the same shoulder and keep in step.

KEEP A CLEAR PATH

- Size up the move before you lift and clear the path you plan to follow. If you can’t see over the load, don’t carry it.
- Use mechanical help (pushcart, hand truck, wheelbarrow, forklift) if the load is heavy or bulky.

TUNING UP YOUR BODY

Your spine cannot be well-supported if your muscles are weak and out of shape. Here are a few ways to keep your body tuned up.

- Wall Slide. Stand with your back to the wall with legs, shoulder-length apart. Press your lower back against the wall. Slowly turn your body until you are sitting. Hold, and then slowly come back up. Repeat.
- Half Sit-up. Lie on your back with your knees bent. Cross your arms over your chest. Slowly pull neck and shoulders up half way to your knees. Hold for 10 counts and then lie back slowly. Repeat.
- Bilateral Stretch. On hands and knees, stretch your arm and left leg straight out. Hold 5 seconds. Switch to the left arm and right leg, hold. Repeat.

CAUTION: If you experience pain during or after these exercises, see your doctor.

LIFTING SAFETY

- Let your abdomen, let’s, and buttocks do the work.
- Get close to the load. Grab the load safely with your hands placed under the object.
- Bend your knees, with feet slightly spread for balance and stability.
- Keep your head, shoulders, and hips in a straight line as you lift. Do not twist.
- Reverse these steps when you set a load down. Move slowly and smoothly without twisting.

LIFTING POINTERS

- To change direction of carry, do not twist. This is especially crucial when doing repetitive lifting. Turn your entire body, including your feet.
- Never lift from a sitting position. Sitting puts more pressure on the spine. Stand before you lift.
- Push rather than pull a load.
- When the object is too heavy for one person to lift—admit it—then get some help.

EQUIPMENT TIPS

PUSH CART

- Make certain that the pushcart is evenly loaded to prevent tipping.
- Push it only from behind—don’t pull it.
- Make certain the load will not block the view of the path you are traveling.
- Never push the load with wet or greasy hands, and don’t go too fast.

HAND TRUCK

- Keep the center of gravity of the load as low as possible with heavy objects placed below lighter objects.
- Keep the load ahead of you when going downhill.
- Never walk backwards with a hand truck.
- Pushing is much easier than pulling because the truck carries the load.