



MATERIAL HANDLER PROGRAM

Employee Guide For Proper
Stretching, Lifting, & Handling of Materials



PreventionWorks™
for Safety

WE'RE SERIOUS ABOUT SAFETY!

MATERIAL HANDLER PROGRAM

The Human Body is an amazing machine. Like any machine, it can break down or wear out if it is not kept in good condition. Creating a “healthy lifestyle” is a phrase we often hear and probably brings to mind thoughts of eating right, not smoking, wearing a seat belt, and exercising.

All of these lifestyle changes reduce and remove stress that can be damaging to our bodies. If you adopt healthy lifestyle habits you’ll feel better and have a longer healthier life. When you stop and think about it, one-third of our life is spent at work where we are exposed to many stressors, both physical and mental.

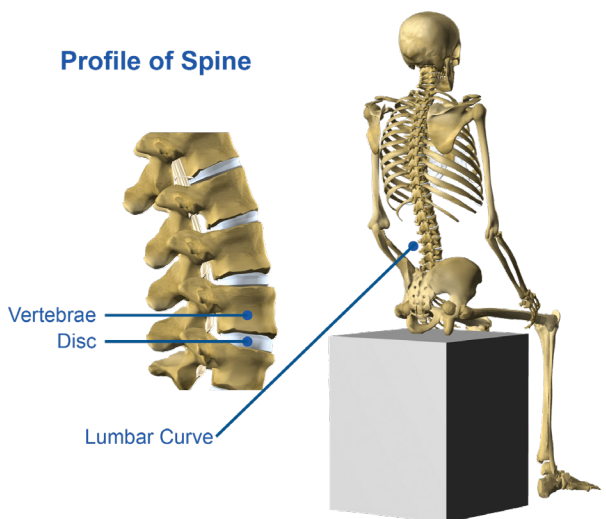
We realize that if we are to achieve our goal of creating a healthy lifestyle, we need to carry this concept into the workplace. We have to understand how to minimize the stressors at work. The Material Handler Program will help to create a “healthy workstyle”.

BODY MECHANICS: BACK ANATOMY

The back is made up of spinal column or stack of bones called vertebrae. Between each of the vertebrae are small cushions called discs.

The discs provide shock absorption between the vertebrae and are made of cartilage with a jelly-like fluid in the middle, which provides for the ability of a joint to articulate or move.

Ligaments, which resemble rubber bands, connect all the vertebrae together and give the structure support. Layers of muscle cover the vertebrae from your hips to your head, which provide stability and allow movement of the spine.



PREVENTING BACK INJURY

Many employees work in a fast paced and sometimes dangerous environment. Not the least of those dangers is the risk of back injury. The amount of strain placed on the muscles and discs of your back is directly related to handling techniques that you use everyday.

WHAT GOES WRONG

In a healthy back, the vertebrae form an s-curve, which is protective because forces on the spine are distributed evenly across the vertebrae, discs, ligaments and musculature of the back. This favorable curvature of the spine is easily maintained by using a head-up posture. Problems occur when this natural curve of the back is lost, as seen below. The most vulnerable part of your back is the lower back or lumbar area. This is where the most stress occurs, especially when the back is rounded. When loads are held away from the body, or if you twist when holding or lifting loads, you can increase stress to the spine - especially to the muscles, ligaments, and discs.

HEALTHY BACK TIPS

- Warm up prior to your work shift and periodically during your shift. See the **Stretch for Safety** page later in this booklet.
- Maintain a healthy lower back curve by keeping the head up and back arched.
- Pivot instead of twisting. Move your feet.
- Use a staggered stance (feet slightly wider than shoulder width) with knees bent to take advantage of the strong leg muscles.
- Move smoothly, avoid quick and jerky movements.
- Keep loads close to your body.
- Do not work beyond your capacity.
- User proper assistive devices.

Profile of Two Vertebrae & Disc

Rounded back creates uneven Disc Compression.

Disc Compression

Disc Bulge

Nerve



LIFTING TECHNIQUES

Golfer's Lift

FOR LIGHTER LOADS AND ONE-HANDED LIFTS

- Forward leg remains straight
- Balance on hips by elevating rear leg
- Use arm support - "Bridging"
- Lift load by dropping rear leg, creating counter lever



Power Lift

FOR MEDIUM TO HEAVY LOADS

- Feet slightly wider than shoulder width
- Staggered stance squat
- Keep load close to body
- Keep head up, back arched
- Lift with legs
- Exhale while lifting



Tripod Lift

FOR LIGHT TO MODERATE LOADS,
ESPECIALLY FROM FLOOR LEVEL

- Single knee on ground
- Transfer load to opposite knee or transfer to shoulder
- Stand with load supported on knee
- Maintain load close to body
- Keep head up, back arched

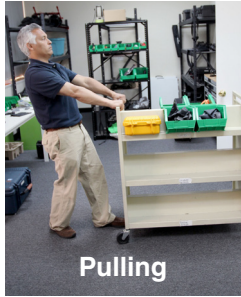


Bridging Technique

- Body weight is supported by the arm rather than the muscles of the lower back
- Excellent technique for reaching activities and when leaning over your work station



Pushing



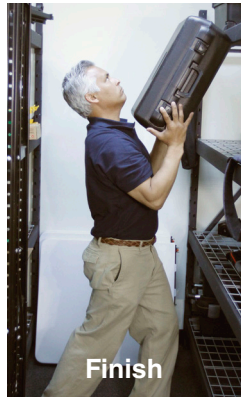
Pulling

Push/Pull

- Whenever possible, always push an object over pulling, to reduce forces applied to muscles and joints
- If pulling is required, always keep hips and shoulders square!



Start



Finish

Overhead Lift

- Head up, back arched
- Step into lift, raise load while moving forward, lower load while rocking backward



Two-Person Lift

- Body mechanics the same as the power lift
- Communication is #1
- 1, 2, 3 Lift!



Low Level Work

- Position equipment in the safest work zone whenever possible
- Never bend at the waist or round your back when performing activities below the waist
- Take a knee for safety

STRETCH FOR SAFETY



Shoulder Pinch

Gently pull elbows back, "pinching" shoulder blades together. Hold for 10 count and relax.



Low Back Stretch

While standing, feet shoulder-width apart, place hands at lower back. Slowly arch back while looking up. Hold for 10 count.



Arm Across Stretch

Cross arm in front of body at chest level with elbows bent. Pull elbow. Hold for 10 count. Repeat opposite side.



Quad Stretch

While standing, support body by holding table or wall. Grasp ankle and pull foot to buttocks. Do not lean forward. Hold for 10 count. Repeat opposite side.



Palm Stretch

Using heel of one hand, gently push back fingers of the other. Hold for 10 count. Do not overextend. Repeat opposite side.



Single Knee to Chest

Stand with your back flat against a secure surface. Use both hands locked below the knees. Bring the knee to the chest. Hold for a 10 count. Repeat opposite side.



Calf Stretch

Stand with a staggered stance chest up position. Keep the heel of the back leg on the floor. Slightly bend the forward leg, feeling a stretch in the calf. Hold for a 10 count. Repeat opposite side.

Hamstring Stretch

While standing, feet shoulder-width apart, squat down with hands on knees. Move elbows down to thighs and slowly straighten legs. Hold for 10 count. When finished, return to squat position. Slowly stand using arm support.



Start



Finish

TIPS FOR TAKING THE LOAD OFF

Use hand or elbow support when bent over working or lifting something.



Always utilize available assistive equipment; never neglect to use assistive equipment in an attempt to get the job done faster.

Wear comfortable shoes with thick soles or try cushioned insole inserts.

Use anti-fatigue matting whenever you are standing in the same position for long periods of time; use a foot rest or alternative legs if possible to relieve back stress.

REMEMBER!

Use proper lifting techniques when performing the following tasks:

- Taking out the trash
- Washing and drying laundry
- Performing yard work
- Working on your car
- Shoveling snow, etc.

MATERIAL HANDLER PROGRAM

For more information on the Material Handler Program, contact Beacon Mutual's Loss Prevention team at 401.825.2667 or seminars@beaconmutual.com.

OTHER SAFETY PROGRAMS:

Visit our website at www.beaconmutual.com to learn about Safety Services available to our policyholders **free of charge** including:

- **Open safety seminars** covering more than 40 of the most popular workplace safety topics
- **Over 100 online safety courses** at Beacon Online University - available in English and Spanish
- **Downloadable safety alerts** - available in English and Spanish
- **Onsite safety trainings** by our local team of experts



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