

PREVENTING BACK INJURIES

DISCLAIMER

The information presented in this manual and the other elements of the program should not be considered as all encompassing, or suitable for all situations or conditions.

Your organization must assume responsibility for implementing a safety/injury/illness prevention program that will work best within your particular work environment. It is recommended that your organization check with legal, medical or other advisors before implementing the information contained herein in order to determine its suitability to your needs and to achieve the maximum benefits for our specific training program.

At the time this manual was created and produced, the information presented was the result of meticulous research from reliable sources. All of the material meets current applicable local, state or federal safety standards as well as generally accepted work standards; however, the producers of this material accept no responsibility and no liability arising from the use of, or reliance on, the information provided.

WHY USE THIS MANUAL?

This manual is designed to help employers, supervisors and managers accomplish the following:

- A. Reduction of Workers Compensation claims, downtime and loss of productivity resulting from back injuries.
- B. Training of employees in back safety procedures and preventive measures.
- C. Reduction of on-the-job sprains, strains and other employee back injuries.
- D. Instruction in the verification and documentation of safety standards and procedures.
- E. Development, implementation and maintenance of a back safety plan within the organization.
- F. Investigation and the proper reporting of accidents resulting in back injuries.

This manual will help you assist all of your employees to understand how their backs work, how they can keep their backs healthy, and how they can protect their backs from potential injury.

The information and guidance presented in this manual are based on experience and knowledge proven to be effective in organizations throughout North America. All information is, presented in clear, concise, easy-to understand, non-medical, non-technical terms.

WHY THE INFORMATION IS IMPORTANT

Back injuries caused by on-the-job accidents are a major problem for commercial and industrial organizations every year. They're a costly, crippling problem in many ways.

Accidental, preventable back injuries account for **millions of hours of lost productivity** in the workplace and **millions of dollars in lost revenue**. Add health-care related expenditures including Workers Compensation claims and medical attention that spans a spectrum from simple first aid to major surgery, and the costs to North American commerce and industry are staggering.

According to The National Safety Council's 1990 "Accident Facts" booklet, work accidents injured the back more than any other of thirteen body parts studied in a 1989 research survey. In fact, back injuries accounted for twenty-two percent of all reported accident. Cases.. It's a fact that employers, employees, consumers and the economy are all tremendously affected.

Now, training, education and preventive measures within the work environment are not only a necessity for the health and safety of employees; they're a legal requirement. State and federal laws are demanding that employers comply with safety standards and regulations in the workplace at the risk of fines.

The need for reducing the causes and incidence of back injuries in the workplace is crucial, for the physical well being of the employees, as well as

the financial well-being of the organization.

HOW TO USE THIS MANUAL

Use the information in this manual as a guideline for training your employees periodically. It's important for their safety and your organization.

Your organization should review its requirements, organizational structure, policies and procedures relating to back injury prevention, and develop its own effective program.

The Back Manual has been designed to simplify your training task. It allows you to structure your training time in a way that fits your needs and requirements. Present the following material to your current employees, and also make it an integral part of your new employee orientation. Beginning with "About The Back" through "Support Systems", the program is structured in a way that allows you to teach it in a series of brief one-topic presentations, or in one longer session if time permits. The "Notes/Highlights" area on the left side of each page of the employee handbook is provided to encourage employees to write key words and phrases.

Before you present the information, administer the pre-training examination to your employees. It will help you determine their level of overall subject awareness as well as their knowledge of specifics relating to back safety and preventive measures.

The most important part of this or any other back injury prevention program must be provided by you and your employees. To be absolutely certain that the information is understood, and that the employees can put it to use effectively, they should take the post-training examination and then actually demonstrate the

exercises and proper lifting techniques presented.

When you have employees conducting a demonstration, ask them to **explain what they are doing and why they are doing it**. In effect, they will be teaching the other employees. Getting students involved in the program and training process in this manner accomplishes the following four things:

1. It **reinforces the information** that you presented.
2. It gives you an opportunity to **offer praise, recognition** and encouragement to employees for understanding and demonstrating back safety techniques.
3. It helps employees develop more of a sense of **personal responsibility** about protecting their backs from potential accidents and injuries.
4. It lets you know just **how much they understand** of the information that you presented. You'll know exactly which points you must review with them.

Back safety procedures must be taught, learned, practiced, and reinforced before they become a habit.

Name _____ Date _____

PRE-TRAINING EXAMINATION

The following quiz is designed to test your knowledge about your back, safe lifting and back injury prevention before you receive training.

You will receive a Post-Training Examination after you receive back safety information. A comparison of the two exams will indicate the effectiveness of the training.

ANSWER THE FOLLOWING TRUE/FALSE QUESTIONS

True ___ False ___ 1. One foot should be slightly in front of the other when you are in a position to lift.

True ___ False ___ 2. You should always bend your knees when you lift an object off the floor.

True ___ False ___ 3. The only time you're putting excessive pressure on your discs is when you're lifting something heavy.

True ___ False ___ 4. You can hurt your back by sneezing.

True ___ False ___ 5. A torn ligament requires surgery.

True ___ False ___ 6. Pushing a load is more of a strain on your back than pulling it.

FILL IN THE SPACES TO CORRECTLY COMPLETE EACH STATEMENT.

7. When you position yourself to pick up an object, your _____ should be centered directly over the object as much as possible.

8. When you're lifting something over your head, if possible, first place it on a _____.

9. Get a good palm grip on the object, hold it close to your body if possible, and lift with your _____.

10. There are many different lifting situations. It's up to you to determine the _____ method before you lift.

IN YOUR OWN WORDS, EXPLAIN THE MOST IMPORTANT PARTS OF SAFE LIFTING. ASSUME YOU ARE PICKING UP A 15-POUND BOX FROM A FLOOR. EXPLAIN THE STEPS INVOLVED IN LIFTING THIS BOX SAFELY:

Your Printed Name

Your Signature

Today's Date

ABOUT THE BACK

Why is it vitally important to understand exactly how your back works?

1. To keep your back healthy. According to the National Safety Council, **ten percent** of backaches are caused by back injuries and other miscellaneous reasons, **twenty percent** are caused by inflammation, like arthritis; and **seventy percent** are the result of degeneration of the spinal disc material.
2. To determine the safest lifting procedure for every type of object and situation you are likely to encounter.

Understanding your back.

1. Your back has three natural curves that form an "S" shape.
2. When the three natural curves are properly aligned, your ears, shoulders and hips are in a straight line. That's good posture.
3. Without support from strong, flexible back muscles, your back will lose **the** three natural curves. The result can be pain and injury.

GOOD POSTURE MAKES GOOD SENSE!

Why lift by bending your legs and not your back?

It helps you maintain the natural curvature of your spine.

Understanding your spinal column.

1. Your spinal column is a complex arrangement of bones (called vertebrae), nerves and discs.
2. Your discs resemble soft hockey pucks and are situated between your spinal vertebrae.
3. Although they're fairly delicate, your discs can with stand a lot of **use ... if** you realize their limitations and protect them from **abuse**.
4. Your discs are under intense pressure - just like a car's shock absorbers. They get a real workout every day just by helping your spine maintain its flexibility when you're running, jumping, walking, or exercising.
5. If you look at a picture of the spine, you'll see how your discs separate your bones. They prevent your vertebrae from shaking, rattling and rolling against each other and - they keep your bones from making contact with nerves and causing extremely painful damage.
6. A jelly-like substance in your discs helps them maintain their flexibility so that they

move smoothly and easily every time you move.

7. If your spine is bent, like when you bend over, here's what happens to the disc: Since your disc isn't flat across the bone, all the pressure is being applied to only a small area of the disc's surface. To prevent back problems, pressure should be applied evenly across the surface of the disc. When you bend your back, you're increasing pressure on just one small part of the disc, instead of spreading it across the entire disc.

8. When you maintain the natural curvature of your spine, you're equalizing the pressure and allowing it to be absorbed evenly across the entire surface of the discs.

Think about your discs.

Think about the fact that every time you bend your back, you're probably damaging your discs. Every time. Little by little. So when you lift anything, keep your spine in its natural curvature, which spreads pressure across the entire surface of your discs.

Think about your ligaments.

1. Ligaments are fibrous tissue that provide support for your muscles and back.
2. When you stretch, they stretch. Stretch too far, and they don't stretch. They can tear and cause severe pain.
3. What's the treatment? Time. Once a ligament is torn, it has to heal itself.
4. Avoid stretching - or - twisting while you lift, which can cause ligament damage.

Think about back strain.

1. It's usually caused by lifting or pulling heavy objects.
2. The force of gravity together with the jerking motion of trying to catch an accidentally dropped object can also cause a back strain or ligament or disc damage. The general safety is let falling objects fall.

Before you even pick up a piece of paper from the floor . . .

think about the right way to bend and the right way to lift.

STRETCHING & EXERCISING

Why it's important.

1. To achieve and maintain a healthy back and body.
2. To lower the risk of back problems from both natural and accidental causes.

The problem.

MOTIVATION

As we all know, it's a lot easier to sit back and think about exercising than to actually put forth the effort to do it. It's tough for a lot of people to motivate themselves to exercise even though they're aware of the short-term and long-term benefits they can enjoy by maintaining a consistent exercise program.

Most people can find more than one reason for **not** exercising. One of the more common excuses is, "I just don't have the time." However, it seems that we always find the time to do the things that we really want to do, the things that are important to us, don't we?

Too often, people get serious about starting and maintaining an exercise program only after they have suffered an injury or have experienced a physically debilitating medical problem.

Don't let that happen to you,

Lack of exercise not only weakens back muscles, it makes the back more susceptible to injuries such as strain and torn ligaments, as we've already discussed. Doctors, physical therapists and other healthcare professionals realize the value you'll receive with a consistent exercise program.

GET MOTIVATED.

IT'S WORTH IT!

The solution.

Make it a pleasure rather than a pressure. Think about all of the positive aspects of what you are doing for yourself while you're exercising. Think about all of the healthful benefits you'll receive.

Create an exercising "mood" with lively music, bright lights and your own imagination. Imagine yourself stronger, healthier, and happier than you've ever been in your entire life!

Before you start.

It's important to **check with your doctor before starting any exercise program.**

Exercise regularly, but use moderation. If you've ever gone without exercising for a long

period of time and then started exercising a lot, you know how sore you can get. When that happens, it's easy to get discouraged and quit. No one wants to be in pain. Worse yet, over exercising can cause physical damage like torn ligaments, sprains, strains, or breaks.

Ease into an exercise program based ,on your particular physical condition, after you get your doctor's OK.

Recommended exercises to achieve and maintain a healthy back:

The number of repetitions suggested should not be considered to be a minimum or a maximum, but merely a recommendation. Vary it to meet your own limitations. It takes time to build up your strength. Be consistent - and you'll be amazed at how quickly you will increase the number of repetitions that you're able to do.

We've already talked about ligaments, and how they stretch and can easily be torn. To help prevent unnecessary pain, discomfort and possible damage to ligaments, ease into the day's activities.

When you get out of bed take a few moments to stretch and warm up your muscles and ligaments.

Put one foot on a chair or other elevated surface and bend forward, keeping your back as straight as possible.

WARM-UP #1

Hold for a count of 8. Return to the starting position. Change legs and repeat. Do 10 repetitions.

WARM-UP #2

Your back needs to warm up ... slowly. Every day. Be good to your back with daily attention (warm-ups and exercise) now and chances are you'll be rewarded with a strong, healthy, problem-free back in the years ahead.

Here's a good stretch to do just before you begin your workday. Stand with your feet apart. Place your hands on the small of your back. Gently arch your back while bending your head and neck backward.

Hold for a count of 5. Return to the starting position. Repeat 10 times.

Just 15 minutes of exercise a day - 3-5 days a week is all it takes to condition your back and keep your muscles strong and healthy. Consistency counts. Without regular exercise, you can lose elasticity in your muscles,

your reflexes can become impaired and you can be prone to torn muscles and other injuries.

EXERCISES

EXERCISE #1

Lie on your back with your knees bent and your feet flat on the floor. Try to get your entire back level with the floor and breathe deeply. Expand your lungs and rest your hands on your stomach. Then, stretch your back muscles and strengthen your stomach muscles by tightening your abdomen and buttocks while you press your lower back to the floor.

Hold the count for 5. Release. Relax for 3. Repeat 10 times, or as many times as is comfortable for you.

This is not a demanding exercise, but it does help strengthen stomach muscles . . . and they're very important to help achieve and maintain a healthy back.

EXERCISE #2

To stretch and strengthen your back rotation muscles, while lying on your back put both knees to one side while rotating your head to the opposite side.

Hold for a count of 6. Alternate sides. Repeat for a count of 6. Do 10 repetitions.

EXERCISE #3

To stretch your lower back, pull both knees to your chest.. Hold for a count of 5. Release. Repeat 10 times.

EXERCISE #4

To strengthen your buttocks, slowly raise your hips upward without arching your back. Keep a straight line from your knees to your shoulders.

Hold for a count of 5. Relax for a count of 3. Repeat as many times as you can without getting tired.

EXERCISE #5

To strengthen abdominal muscles: Cross your arms loosely and pull your chin in toward your neck. Tighten your abdomen and curl halfway up.

Hold for a count of 5. Return to the starting position and repeat ten times.

EXERCISE #6

Stand with your knees bent, feet apart and heels flat on the floor. Squat down as low as your leg muscles will permit. You should feel the stretch in your hips

Hold for a count of 5. Stand. Relax for a count of 3. Repeat 10 times.

This exercise will stretch and strengthen the lifting muscles in your back, hips and legs. If you haven't been doing leg bending exercises for a while, you may experience some muscle soreness, and it might be necessary to lower the number of repetitions.

With repeated exercising 3 to 5 times a week, this should disappear and you'll get into shape quickly.

EXERCISE #7

Here's an easy exercise that stretches and relaxes muscles.

Sit with your feet apart and your neck relaxed. Bend forward slowly and you should feel the stretch from your shoulders to your hips.

Hold for a count of 5. Return to starting position. Repeat 10 times.

EXERCISE #8

Stand with your hands at your sides and bend your knees slightly. Lean forward and push your arms and your buttocks backward. Lift your head and shoulders while tightening the muscles in your back. You'll feel the tension all the way from your back to your legs.

Hold for a count of 5. Return to the starting position. Repeat 10 times. This is an excellent exercise for strengthening your back.

EXERCISE #9

You need power in your legs to handle lifting. Here's an exercise that will give you that leg power. Stand with your back against a wall and your legs out so that your feet are positioned slightly in front of you. Let your body slide down the wall halfway, as you bend your knees and exert leg pressure to maintain your position. Hold in the lowest position for a count of five. Return to the starting position.

Repeat 6 times. The longer you can hold in the lowest position, the stronger your legs should become.

EXERCISE #10

Here's a good isometric exercise if you sit most of the time.

Just sit all the way back in a chair, with your feet flat on the floor. Hold the seat of the chair with both hands. Push down with your hands and lift your knees as high as you can while bending your upper body slightly forward.

Hold for a count of 6. Return to the starting position. Repeat 6 times. It's a **great** exercise for your stomach muscles.

About back strains.

Most back strains are usually muscular injuries. Exercise, awareness, caution and good posture can help prevent them.

A straight back will help keep your spine, back muscles and other body parts in correct alignment.

Using back muscles to support the body while sweeping, weeding a garden, watering a lawn, tying a shoelace or some other uncomfortable, awkward position can cause those back muscles to tire quickly. They're unnatural postures. If your back isn't in shape for them, the result over a period of time can be fatigue, discomfort, muscular aches, pains, strains and even permanent deformity.

You can help prevent muscle strains by exercising, having good posture and by practicing safe lifting techniques.

STRAIGHTEN UP!

LACK OF EXERCISE & POOR POSTURE=

POTENTIAL BACK PROBLEMS

SAFE LIFTING

Why it's important.

1. To help maintain a healthy back..
2. To lower the risk of back problems.

Position & Pressure.

The safest lifting position is one in which your back retains its natural curvature. The pressure is then spread evenly across the entire disc surface and not on one side, as it is when you bend your back.

The first step: . . . Think!

Before you lift anything, consider the following factors:

1. The size of the object.
2. The weight of the object.
3. The position of the object.
4. How you should lift the object. (Should you get help?)
5. How you should hold the object.
6. Where you must place the object.
7. The area. Is it cluttered and congested or clear?

Then, lift it safely!

Recommendations.

Following are some basic safe lifting principles. Keep in mind that there are hundreds of different lifting situations where the principles may not apply or may have to be modified to suit the circumstances.

It's up to you to determine the correct method for lifting! Before lifting anything, position your feet correctly. Have one foot in front of the other, if possible. Center your body over the object to be lifted. If your feet are too close together, you can lose your balance. The result can be stiff muscles in your lower limbs and back. When your feet and arms are properly placed, you have a good center of gravity for your body and steady balance. Tucking your chin in also helps you maintain the proper curvature of your spine.

The palm grip.

If you lift with your fingers, you risk dropping the object.

Get a secure palm grip. This gives you a stronger, steadier, more secure hold on the object.

Proper Lifting Technique.

Center your body over the object. Bend with your knees, keeping your back straight. Get a good palm -grip. Bring the object close to your body. Then stand up. You'll be using your leg power, rather than putting a strain on your back.

The lever principle.

Your back works on the lever principle. That means you have a weight on one end and a weight on the other end. On one side of the lever is the weight of the object. The other side of the lever consists of your spine, muscles, nerves and all of the other parts of your back.

Whenever you pick up anything, you're putting pressure on your discs. In fact, whatever you're picking up is putting a ten to one ratio of pressure on your back. Therefore, lifting a ten-pound object exerts 100 pounds of pressure on your back; and **that's** if you're lifting properly!

Pressure point.

What happens if you don't lift correctly?

Bending forward while lifting applies intense pressure to one area of a disc. If you don't hold the object close to your body, you're putting even more pressure on your back and

discs.

THE POWER ZONE!

Sometimes called the "safety" or green zone, the power zone is the area closest to your body. This area lets you get the maximum lifting effect in the safest manner.

Since there are many instances where the lifting requirements don't permit holding an object close to your body, the "caution" or yellow zone offers a safe alternative. In this position, your hands are somewhat outstretched, below or slightly above the shoulders. The red or "danger" zone should **always** be avoided. Stretching, bending or twisting while lifting will put you in this potentially harmful zone.

LIFT SAFELY. IT'S YOUR CHOICE!

To correctly place a lifted load on an elevated surface.

Place the object on the edge of a table, bench, shelf or other elevated surface, then slide it into position. This will keep you from stretching with the load, which might strain back muscles. Also, don't release the object with a jerky move. Let it down smoothly and easily. This way, you'll be going easy on your back.

To lift something over shoulder height. Pick up the object safely. Lift it onto a lower shelf or your leg or hip. Get a better grip on the object, so you can get more weight centered under it. **Let your leg power do the work!**

Twisting, stretching & lifting.

Don't do it!

If you need to move something in a different direction after you've lifted it, shift your feet and body in that direction. **Don't twist and don't stretch during a lift. The results can be damaging and painful if you do!**

Help!

If something looks heavy, awkward or hard to handle, get help before you attempt to lift it yourself.

More help!

if possible, get mechanical help in lifting. Use a cart, hoist, forklift, and pallet jack, drum carrier or other mechanical means to take a load off your back.

besides saving your back, it'll make your work easier and you'll be more productive.

Push.

Whenever possible, push a load instead of pulling it, using good body mechanics.

Place your hands on the object and bend your elbows and knees. Put one foot forward and push ahead with your back leg. Take short steps.

Don't lean into a load when you're pushing it.

Push with your legs - not your back!

Pull.

If circumstances require that you can't push a load, but must pull it - get a good firm grip on it. Bend your elbows and knees.

Put one foot back for balance. Pull with your forward leg while taking short, steady steps.

Don't arch your back.

Get help if the load is heavy. Hernias can happen when you try to exceed your limitations.

BEFORE YOU LIFT, PUSH, PULL OR MOVE ANYTHING HEAVY,

ASK YOURSELF:

IS IT WORTH A HERNIA?

Hernias

are generally caused by a compression of the abdominal contents towards naturally weak areas.. The most common point for hernias to occur is at the lower part of the abdominal wall, immediately above the inner part of the inguinal ligament where there's very little or no muscular protection and support.

Lifting a heavy object while bending over
Lifting a heavy object while bending over
compresses your organs and can result in immediate rupture or a weakening that builds over time into a hernia.

The cure is usually surgery.

HERNIAS:

ANOTHER GOOD REASON TO THINK FIRST & THEN LIFT SAFELY!

MORE WAYS TO INJURE YOUR BACK

NOTES/HIGHLIGHTS

Just the normal, natural wear and tear of bone, disc, muscle and ligament tissue that occurs from everyday tasks can lead to trauma, overexertion and other back problems.

Here are just a few more of the many, many ways that you can hurt your back.

Sneezing.

When you sneeze, your body becomes rigid. That's because you've conditioned yourself to react that way. It's possible to just relax and just let it happen. It might just save you a pain in the back.

Since the nerves in your back are sensitive, you'll bend slightly to try to keep the discs properly aligned and reduce the chance of vertebrae hitting the nerves. The bottom line is awareness. Be aware of your actions, reactions and potential back problems just from the simple act of sneezing . . . and just like the Boy Scouts say, Be Prepared.

Jumping, Slipping, Tripping & Failing.

Again, caution is the key word. Just be careful walking, climbing, and jumping off ladders, forklifts and even stepstools.

Sports, etc.

Vigorous sports and other activities can lead to back injuries. But you can be careful and avoid situations that lead to high risk.

Maintaining a healthy, problem-free back and controlling circumstances that could lead to back injuries are up to you.

SUPPORT SYSTEMS

Help your back.

Take advantage of any support that you can give your back anytime you can.

If you stand in one position for any substantial length of time, put one foot on an elevated surface and then switch feet frequently. This will help you maintain the natural curvature of your spine.

While sitting, take a tip from professional truck drivers. They help ease the pressure on their backs by adjusting their seats to keep their knees elevated above the level of their hips.

If you're sitting in the same position for a several hours at a time during your workday, proper chair and equipment adjustments are extremely important.

Take frequent brief breaks and do simple, easy stretching exercises, during the breaks.

Back support belts.

According to a medical research project funded by the U.S. Department of Health and Human Services, using a back support device can help prevent back injury and reduce lost work time. The study also indicated that knowledge is a key element in a back safety program.

It's important to keep in mind that even the manufacturers of back support devices state that they won't make you any stronger, and they won't **prevent** a back injury. They will support your back when you use proper lifting techniques.

GIVE YOUR BACK A BREAK.

TREAT IT RIGHT!

EMPLOYEE RESPONSIBILITY

As a condition of employment, each employee has the responsibility to work and act safely on all jobs, at all times. Additionally, each employee is responsible for following safety rules, procedures and generally accepted safety standards. **THAT'S YOUR RESPONSIBILITY.**

Your responsibility to the company, your family and yourself goes even further. The company is obligated to provide a safe and healthful work environment, but the company can't do it alone. There are hundreds of situations on a daily basis, especially when lifting, where the rules don't always cover a particular condition or situation. That's where you have to take the time to "size up" the situation and apply your knowledge and training, to perform that job safely and without injury. Lifting safely is simply a matter of

knowing the natural curvature of your spine, how the discs interact with the vertebra ... then choosing the correct lifting method. You can't always BEND YOUR LEGS ... you aren't always lifting a nice, neat box off a level floor surface. Awkward or difficult lifting positions require common sense and finding the safe way to lift. That's your responsibility.

Each company is different, with different rules and policies. However, if you do experience a back injury, it's generally accepted that the CAUSE of the back injury was due to improper lifting, position ... or something the employee did or did not do that contributed to the injury. Anyone contributing to the cause of an injury should be explained what the cause was ... so the employee will understand the cause and can prevent future, similar injuries. We call that a **SAFETY COUNSELING**. Actually, it's really training. Training to show you what you did to cause the injury, then showing you how to prevent the same injury from occurring in the future. Another reason for this COUNSELING is documentation that safety rules are enforced. Your company is required to document safety rule enforcement. counseling serves two important purposes:

1. To explain how the employee contributed to the injury, thus learning what went wrong and how to correct the problem.
2. Document the fact that the company is concerned for the safety of all employees and takes the action necessary to ensure that similar injuries can be prevented through training. SAFETY COUNSELING is not intended as disciplinary action. It's simply a training tool to make employees aware of what they did wrong and what steps must be taken to prevent similar injuries. Should an individual continue to demonstrate unsafe behavior or unsafe acts or continue to violate safety rules and procedures, disciplinary action would be warranted.

The company has an obligation and responsibility to ALL employees, to fully enforce all safety rules, policies and procedures. For those employees who disregard safety, the company has an obligation to modify or change this unsafe behavior ... up to and including termination of employment. Each company has their own policies regarding disciplinary action, but in industry generally, disciplinary action for safety violations is quite common.

THE OBJECTIVE OF SAFETY COUNSELING, DISCIPLINARY AND OTHER ACTIONS IS SAFETY FOR ALL EMPLOYEES. SAFETY IS SERIOUS BUSINESS BECAUSE IT INVOLVES ALL EMPLOYEES. TO THIS END, THE COMPANY MUST TAKE STEPS AS NECESSARY TO PREVENT INJURIES AND ILLNESSES.

DO YOUR PART... LEARN HOW YOUR BACK WORKS, HOW TO LIFT SAFELY AND DON'T TAKE CHANCES. YOU AND YOUR BACK ARE MUCH TOO IMPORTANT TO DO OTHERWISE.

POST-TRAINING EXAMINATION

The following examination is designed to determine your level of knowledge about how your back works, safe lifting techniques and general information to help reduce back injuries.

1. Exercise will prevent back injuries.
True False
2. If the object you're lifting isn't heavy, don't concern yourself about the lifting method.
True False
3. Good posture will often help reduce back pain.
True False
4. The back forms a natural "C" curve.
True False
5. One foot should be slightly in front of the other when you are in a position to lift.
True False
6. You should always bend your knees when you lift an object off the floor.
True False
7. The only time you're putting excessive pressure on your discs is when you're lifting something heavy.
True False
8. You can hurt your back by sneezing.
True False
9. A torn ligament requires surgery.
True False
10. Pushing a load is more of a strain on your back than pulling it.
True False

FILL IN THE SPACES

11. You should bend your legs while lifting, to keep your back in its natural _____.
12. Discs resemble soft _____, and are located between your _____ to give your back flexibility.
13. For the discs to work properly when you're lifting, pressure should be spread _____ across the entire disc surface.
14. If you bend your back, you're putting pressure on one side of the disc, which can cause the disc to _____ more quickly, and could lead to a _____.
15. Ligaments are fibrous tissue that provide support for your muscles and back. Ligaments stretch like rubber bands, but if they stretch too far they can _____.
16. If you're lifting an object and it begins to fall, the safety rule is to _____.
17. If you're picking up an object from the floor, the basic safe-lifting technique is to place one foot slightly in _____ of the other, _____ your body over the object, at the knees, get a good _____ grip, and lift the object as close to your _____ as possible. Then, stand up.
18. When you're lifting an object, you should avoid the _____ zone and keep the object within the _____ or _____ zone.
19. Your back works on a lever principle. This means that there is a ten to one power ratio between the weight you're picking up and the amount of pressure it puts on your back. If you lift an object weighing ten pounds, you're putting approximately _____ pounds of pressure on your back.
20. When you lift anything and need to go in another direction, move your _____ in the proper direction. Don't lift and twist.
21. Pulling a heavy load puts a strain on your abdominal muscles and your back, and can result in a _____. The best advice is not to pull anything, but if you must, be sure you know how heavy it is. Get help if it's too heavy.
22. Exercise and safe lifting techniques are all important if you want to keep your back _____.

LIST SOME THINGS YOU CAN DO TO HELP YOURSELF MAINTAIN A HEALTHY BACK AND PREVENT BACK INJURIES.

True/False Questions:

1. False (Exercise won't necessarily prevent back injuries, but it will help.)
2. False
3. True
4. False ("S" curve)
5. True
6. True.
7. False
8. True
9. False (Torn ligaments generally must heal by themselves.)
10. False

Fill-in-the-Blank Questions

11. Curvature, or position
12. hockey pucks . . . vertebrae
13. evenly
14. wear out . . . backache/injury
15. tear
16. let it fall.
17. front . . . center..... bend . . . palm..... body
18. "red"/"danger..... green"/"power..... yellow/caution"
19. 10
20. body
21. hernia . . . pushing
22. healthy

EMPLOYEE TRAINING DOCUMENTATION

EMPLOYEE NAME

DEPARTMENT

DATE OF TRAINING

I hereby acknowledge / have received training and understand the Back Injury Prevention rules, policies and procedures, as provided by my employer this date.

Information relating to the three natural curves of the back and how the discs provide flexibility between the vertebra.

Information explaining the importance of maintaining the three natural curves of your back when lifting or working.

Information explaining the importance of exercise to properly maintain the back in a healthy and flexible condition.

Information explaining that unsafe lifting techniques can contribute to back injury, therefore are to be avoided at all times.

The back works on the lever principle which means that lifting a 10 lb object safely, applies 100 pounds of pressure on the back.

I am the only person who can make the decision how to lift safely. Using the training and information received, I know fully how to make the proper decision to lift safely, regardless of the lifting condition.

When a load to be lifted is too heavy or awkward, I understand it is my responsibility to get help or not make the lift.

Employee Signature

Date

**THE INFORMATION CONTAINED IN THIS MANUAL
IS NOT INCLUDED IN THE EMPLOYEE MANUAL
IT SHOULD BE USED TO GIVE MORE DETAILED
INFORMATION
TO THE TRAINER/SUPERVISOR FOR
IMPLEMENTING AN EFFECTIVE BACK INJURY
PREVENTION PROGRAM**

The following information is NOT CONTAINED in the employee manual.

It is intended to aid you in achieving more in-depth knowledge about specific subjects related to back safety.

MALINGERING

Many employers believe that back injuries are the result of malingering, or persons who simply want to file a claim to receive compensation, disability or time off from work. In actuality, this does occur in businesses and industry, but not at a high rate of incidence as is generally perceived. The wear and tear of bone, disk, muscle and ligament tissue from everyday tasks can eventually lead to cumulative trauma, overexertion and other back problems. Working with poor posture is an obvious hazard, as the body's support structures are forced into unbalanced and weaker positions. Standing or working in an unchanged position also risks weakening back muscles through disuse. Working with poor posture is an obvious hazard, as the body's support structures are forced into unbalanced and weaker positions. How about overweight persons who put extra strain on muscles and ligaments to support their body as well as the extra bulk carried? Lack of exercise is another contributing factor in back injuries.

All this information simply points out that there are many causes of back problems, and not all are attributed to strictly lifting problems. Certainly, back injuries impact the employee, but the cost to employers is staggering. Back injuries account for about one out of every five compensable injuries, but they demand **ONE THIRD** of all compensation needs. Consider the medical costs for treatment, loss of wages for the individual, loss of productivity for the business and extremely high costs of rehabilitation. Something needs to be done to reduce the pain and suffering of the employee and the high costs to the employer.

TREATMENT PROTOCOL

To provide some idea of what type of treatment is provided to persons with back injuries, let's look at some of the standard treatment approaches now offered by the medical community. These are standard approaches, however, each individual may be treated differently by their physician, depending upon that physician's treatment philosophy:

Bed rest: Can be with or without authorization to get out of bed.

Thermo-therapy: A local application of superficial deep heat using diathermy, ultrasound, infrared rays, warm fomentation, heating pads or hydrotherapy.

Cryotherapy: Cold packs for local application of ice or iced water with ice wrappings or compresses.

Traction: Intermittent or continuous longitudinal elongation of the spine, either by mechanical or manual methodology.

Massage: Deep or superficial manipulation of the soft tissues according to defined techniques.

Manipulation: High velocity, low amplitude movement of the vertebra beyond its physiological range, but with its anatomical range.

Ultrasound: Deep heating agent using sound waves to increase the tissue temperature to a depth of 5 centimeters or more.

Electrical stimulation: High voltage, low amperage direct current used to decrease synovitis, edema, pain and muscle guarding.

Spinalorthosis: Rigid orthopedic braces, custom made for long term use, to provide support to the lumbar and cervical area by immobilization.

Certainly, there are combinations of the above treatment recommendations, each method depends upon the treating physician. It is interesting to note the causes of many low back injuries lie in daily work activities, however, the lasting effects of any of these treatments are minimal, as outlined in an article published in Occupational Health and Safety magazine: "Consequently, a treatment that involves the patient both passively and actively has a greater chance of returning the patient to work and keeping him/her there. Long term passive care, on the contrary, has developed a revolving door patient situation, with six weeks of hot pack, then six weeks of ultrasound, for example. Additionally, the inactivity incurred during the treatment creates further weakening of the musculature and increase the chances of re-injury.

An aggressive rehabilitation program is focused around an individualized, structured exercise

program, geared to create improved stamina, flexibility, strength and work readiness. The program should start immediately after-or in conjunction with the passive treatments. A team approach, with physician, physical therapist, rehabilitation specialist and insurance carrier working together, helps ensure effective treatment. The role of exercise in the treatment of low back injuries has long been questioned. Yet many researchers have identified various deconditioning symptoms, especially weakening of trunk muscles, in patients with low back problems. It has been reported that workers with reduced isometric lifting strength had increased episodes of low back pain. In a study evaluating the protective effects of strengthening exercises in firefighters, the study found that with increasing fitness levels, a significant protective effect for back injuries was gained. Further evidence was given in a study that compared electromyographic signals of back supporting muscles during prolonged postural stress conditions in two groups of people: One group with low back injuries and one of apparently healthy individuals.

The data suggested that muscular deficiency is a major contributor to low back injury. The following list is an argument for prescribing exercise to patients with low back injuries:

1. To decrease pain.
2. To strengthen muscles.
3. To decrease mechanical stress to spinal structures.
4. To improve fitness level to prevent injury.
5. To improve posture.
6. To improve mobility.

The strength of the trunk extensor muscles is often reduced with chronic back pain and muscular insufficiency-in the form of decreased endurance-is a contributing factor in idiopathic low back pain. Adequate strength of the trunk muscles is necessary for a full return to function and work. Muscle strength may also be related to the degree of incapacity of a back patient, if not the degree of pain.

REHABILITATION COMPONENTS

To achieve a return to work, a rehabilitation program should include not only treatment, but also

conditioning, education and orientation and of course, job analysis and modification as necessary. A conditioning program should include several elements, such as:

1. Walking on a track or treadmill without incline at speeds varying from 2.5 to 3.5 miles per hour.
2. Swimming in a pool under well heated conditions (80 to 86 degrees).

3. Bicycling on a stationary bicycle is another non-weight bearing exercise that can be effective if proper body posture is maintained. The traditional position of a ten speed racing bike is not advisable without appropriate strengthening of the back musculature or reversal of the handlebars. The aerobic component should last 35 to 40 minutes and be done three to five times a week.

(Aerobics classes are not recommended unless a clear assessment of the patient's readiness warrants this. Issues such as vertical impact on the spine, extreme ranges of motion and the intensity of these classes require close scrutiny before a back patient should participate. The same considerations are applicable to rope jumping and jogging, or any other activity that jars the spinal column).

4. Flexibility exercises should be based on each patient's need. At the patient's initial evaluation, flexibility deficits are noted and a specific program is outlined. The importance of proper flexibility cannot be overstated, given the fact that flexibility is joint-specific, and repeatedly activated muscles require regular stretching throughout the workday. Currently, flexibility and strengthening exercises for low-back trunk rotations; hyper extension exercises and hamstring stretching machines that work individual muscle groups are essential. The objective of strength training is to develop proportional strength gains in all major groups, especially those involved in the functioning and support of the back region. Partial sit-ups can also be helpful in achieving this goal.

Once the patient has reached an adequate level of conditioning, the patient is introduced to work simulation tasks. These tasks are conducted under the physical therapist's supervision, using increasing levels of resistance up to a level required for the job. At all times, proper forms and techniques are demonstrated and emphasized. It might be added that a person may not know how to lift properly, so it's important that proper forms and techniques are demonstrated and emphasized. It takes a long time to break old habits. Despite the fact that medicine continuously develops new and better assessment

and treatment tools, the treatment of low back injuries to date is not any more clear cut than it was 10 years ago. We know that lifestyle habits can contribute to the incidence of these injuries, so treatment should include improving lifestyle habits. In today's management of the back patient, both passive and aggressive treatment are needed.

The rehabilitation program should not only return the patient to work, but also create awareness about prevention of future episodes". Article courtesy of Occupational Safety and Health Magazine, January 1990 (Oort, Frederick, Pinto, Ragons) It would assume to a normal, reasonable person, the above information simply means treatment of back pain/injury is not limited to one approach. It can also be said that each physician's diagnosis and subsequent recommendation for treatment is dependent upon that physician's own personal knowledge and regimen. Chiropractors take one approach. Orthopedic surgeons make take another and so on. What's the answer for those of us in industry looking for answers to best help our employees?

Again, each organization is different, with different procedures, policies and resources. One must look at the organizational structure and culture. Is there an identifiable program for preventing back injuries? Is there consultation with treating physicians as to the organization's recommendations for treatment philosophy? (This statement should not be construed to try to tell the physician how to treat a patient, but moreover consulting with the physician to explain the patient's job, work duties and how the organization can best fit into the rehabilitation process and return the individual to work).

Without this consultation, there is no team work. The physician will not normally volunteer to open relations with an organization. Their attitude is the patient was referred for treatment..... that's it, we'll take it from here. The organization does have a responsibility to make the injured party "whole", so why shouldn't the organization be a participant in the treatment and rehabilitation process? No doctor in the medical profession will allow a non-physician to dictate treatment protocol. That's not the organization's function or expertise, but it is very important that the physician and the organization **both** understand what the treatment is, what support is needed, what rehabilitation process is required and how the organization can participate for the maximum effectiveness of the entire treatment/rehabilitation process.

Organizations must get involved from the beginning of the process to the end. Part of the process, and an important process is communicating regularly, with the injured employee. This is overlooked more often than not and it's a critical part of the recovery and rehabilitation process. Obviously the goal is professional care for the injured worker and eventual return to work, however, to

be realistic, an organization also has a responsibility to its shareholders and all other employees to reduce costs, where applicable and feasible and worker compensation cost reduction is an admirable and expected goal.

As an example, let's say the organization has a fear of employees malingering through the ruse of using back injuries as a method of "getting time off from work". This organization sees a trend of people taking 4 days to three weeks off every time an employee complains of a back injury. This type of "time off" treatment may be a standard regimen for that particular physician. Talk to the doctor and explore the options. There are confidentiality rules and other standards that may preclude this option, but it's worth a chance. Talk to the treating physician about your fears; perhaps the physician could shed some light on the treatment philosophy, or enlighten management in additional prevention techniques, or even visit the organization's facilities, to get a better understanding of the type of work conducted by employees. It doesn't hurt to express your feelings with the doctor and quite often the doctor may try different treatment approaches compatible with that organization's employees. One company investigated several "suspicious" back injury claims, to find employees not at home with bed rest, but doing other things, including athletic activity. Sub-rosa investigations of suspicious activity has revealed (**film** and videotape) that an injured person (back injury) was out riding a bicycle or participating in bowling, but unable to work. The employee's defense was the treating physician said this activity was correct and authorized as part of the treatment/rehabilitation process. **AS MUCH AS POSSIBLE, TALK WITH THE TREATING PHYSICIAN.** Not necessarily to find out what the employee can or can't do while off work, but what can the organization do to help the employee recover and return to work, as quickly as possible.

WHAT ABOUT LIMITED/RESTRICTED DUTY?

Some companies say yes, some say absolutely not. "If I let one person do "light duty" while they're injured, I'll have a whole company on light duty". Another fear of using injured employees for limited or "light" duty is the employee may suffer another injury, making the injury worse. There are no guarantees, but the facts and experience show these fears are unfounded or supported by facts. It is in the best interest of the employee and the company to get the employee back to work as soon as medically advisable. The employee loses wages, the company loses productivity. The alternative is for the injured worker to sit home and watch television or other activity, while insurance statistics and research have demonstrated that the longer the employee is off the job..... the more difficult and costly

it is to effectuate final return to duty. Each organization should make their own determination about light duty, but the suggestion is always to get the employee back to work as soon as possible, even if it's only limited or restricted duty. It's good for both the employee and the organization.

WHAT ROLE DOES EXERCISE PLAY IN BACK INJURY PREVENTION?

There aren't many experts, or even employees that would disagree that exercise is important to a healthy back and body. It's motivating people to exercise that's the big problem. It's easier for a non-exercising individual to dream up rationalization for not exercising, than it is to exercise. You know the arguments, but if you want to stop back injuries, exercise must be part of the plan. Back exercise helps strengthen and increase flexibility in the muscles and joints that support your back. It takes about 15 minutes a day, for 3 to 5 times a week, to condition the muscles that keep your back healthy and balanced. The added benefit of exercise is the entire body becomes more healthy. We are providing some recommendations, but as the lawyers say, be sure any exercise program is approved by a physician. There are a number of variations for back exercises, but the ones we mention in the manual seem to be the most popular.

WHAT YOU NEED TO KNOW ABOUT YOUR BACK.

Without going into complex, technical information there are some important aspects of back nomenclature and basics everyone needs to know. Regardless of what your job is, understand how the back works is one of the most important parts of keeping your back healthy. If you know and understand how your back works you can always figure out the best approach to safe lifting, regardless of the lifting situation and circumstance. You've all heard the reminder to lift with your legs, not your back. Why is that important? What do you do if you can't lift with your legs? What about those awkward positions ... how can you lift safely?

YOU NEED TO KNOW HOW YOUR BACK WORKS, SO YOU CAN MAKE THE PROPER LIFTING DECISION UNDER ANY SITUATION OR CIRCUMSTANCE.

IS LIFTING UNSAFELY THE ONLY WAY YOU CAN INJURE YOUR BACK?

No. You can injure your back by sneezing. By slipping and falling. By sleeping in the wrong kind of bed. By jumping off elevated surfaces, such as jumping off a forklift or off a ladder. Prevention

COULD include not doing all these things, but how do you prevent a sneeze? You can exercise caution when walking to prevent slips and falls and you can find the proper bed to sleep on and don't jump off forklifts or ladders, but how do you prevent a sneeze? There are many ways to injure your back, such as sex, sports, being thrown off a horse and so on, but you can control most of these things by exercising caution, maintaining a healthy back and controlling the circumstances which could lead to a back injury.

Even back injury due to sneezing can be prevented **if** you think about it. When you sneeze, your body is rigid and the activity of reacting to a sneeze could be to "go with the flow". Only those people with back pain can tell you what that is. It's like a person who is recovering from stomach surgery and tells everyone not to make him/her laugh because of the pain involved. If you have a sensitive back, with some pain and you sneeze, the most natural reaction is to bend slightly. A person with back pain knows where the pain comes from and will naturally bend when sneezing. What is happening is the nerves in the back are quite sensitive, so the person will try to bend slightly to keep the discs properly aligned, reducing the chance that the vertebra will hit the nerves. We can't explain it to you, but someone with back pain can give you a full explanation. The moral of the sneezing story is simply this. An ounce of prevention..... keep your back healthy, flexible and be prepared for the circumstances. Knowledge of your back plays an important part of the prevention process. From time to time, hernias creep into the injury arena, but not too many people know the **hernia story**:

A hernia is a protrusion of one of the internal organs through a gap in the walls of the cavity in which it is contained. The most common point for hernias is at the lower part of the abdominal wall, immediately above the inner part of the inguinal ligament, where there is little or no muscular protection and support. A hernia is generally caused by a compression of the abdominal contents towards these naturally weak areas, which may result in a loop of the intestines being forced into one of the ducts. To reduce the exposure to hernias, is to keep your legs straight and feet together or balanced. When you bend your knees, keep your legs straight and use your leg power to lift a load. Lifting a heavy object while bending over compresses your organs and can result in immediate rupture, but more often, regular bending and lifting the wrong way can create further weakening and over a period of time, have the same result. Usually, surgery is the only cure for hernias. There is more than one reason for using the safe lifting technique.

HOW ABOUT TRAINING AND BACK SCHOOLS?

A medical research grant funded by the U. S. Department of Health and Human Services provided extensive back supports, training and "back schools". A portion of their findings are listed below, however, should you want to order the complete report, entitled:

THE INFLUENCE OF PROPHYLACTIC ORTHOSES ON ABDOMINAL

STRENGTH AND LOW BACK INJURY IN THE WORKPLACE, address them to:

Department of Rehabilitation Medicine

University of Texas Health Center

7703 Floyd Cud Drive

San Antonio, Texas 78284

"Low back pain is the most common and costly musculo-skeletal problem affecting the working the working population. Up to 35 percent of sedentary workers and 47 percent of physical laborers may acquire occupationally related low back pain. Approximately 2 percent of the total U.S. industrial work force suffers a compensable back injury every year. Once an individual has experienced an episode of back pain/impairment, the risk of subsequent injury increases. It is also likely that each recurrence will be more severe. Estimates for the lifetime incidence of low back pain in (North) Americans range from 65 to 85 percent. The number of work days lost because of back pain is approximately 1.4 days per worker per year. **This constitutes nearly one quarter of all disabling work-related injuries in the United States.**

Collectively, the data suggest that efforts to prevent work-related back injury and its consequences would have dramatic benefits from both a social and economic stand point. Most back injuries are not the result of a single traumatic incident, but rather a compilation of minor traumatic events occurring during normal working conditions for reasons that are seldom obvious to the individual worker. Successive injuries result in more severe impairment and increase the probability of long-term disability. It is important to intervene early and vigorously with even a mild or moderate back injury to prevent a continuation of biomechanical factors, which may lead to repeated and progressively more serious episodes of impairment. In fact, improper body mechanics and unhealthy work habits may take their toll on a daily basis. In recent years, there has evolved a body of evidence that suggests that the etiology of most but not all low back pain is due to insidious and chronic

deterioration of the intervertebral disc, facet joints and ligaments in the back caused by biomechanical wear and tear. Bending, twisting and vibration may result in increased intradiscal pressure, microtears and impaired nutritional status for the intervertebral disc and associated structures.

A number of intervention programs have evolved to reduce the recurrence of back pain and to prevent low back injury through educational programs. These "back schools" typically consist of classroom training in the proper use of one's body (body mechanics). Multiple researchers have reported that such intervention can reduce the incidence and severity of back pain. Although these initial reports have indicated that educational programs reduce the incidence and severity of back pain in the targeted group, these programs often have not been continued by employers, either because of failure to recognize the importance of repeated training or because the programs were not viewed as cost effective. It is important to note that most programs using the back school approach either offer comprehensive training to large groups of workers who are a risk for back problems or provide training to those who have had previous episodes of back pain.

Orthotic devices, most notably lumbosacral orthoses or back braces, have been used extensively in the remediation of chronic low back pain and discomfort. (In the past, one of the reasons for not recommending these back support belts has been the belief that the use of back braces would result in loss of strength in the abdominal musculature). The study showed that neither sound biomechanical reasoning nor empirical observations under controlled conditions have been offered to substantiate these beliefs".

Of course there are many more pages of how the study was conducted, graphs, charts and so. This study was designed to determine the effect of multimodal intervention and the prevention of back injury and to evaluate the adverse side effects of using a lumbosacral corset in the workplace. Controls and training-only group showed no changes in strength productivity or lost time. Orthoses and training-group showed no changes in strength productivity or accident rate; however, they showed substantially less lost time. This study supports the concept of using education and prophylactic bracing to prevent back injury and reduce time loss. It appears that the use of intermittent prophylactic

bracing has no adverse affects on abdominal muscle strength and may contribute to decreased lost time from work injuries. For the complete report, simply write to the above address for a copy. It appears that back support devices do work, but keep in mind, even the manufacturers of the devices state clearly that these devices will not make you stronger or will the devices prevent a back injury. It's simply more support for your back.

The study indicates that training certainly helps, but it has to be on-going and continuing. Once a year or once a lifetime isn't enough. You must remember that it took a lifetime to learn bad habits, and it will take a lot of training, education and supervision/support to correct those bad habits.

WHAT DOES ALL THIS MEAN?

Trying to summarize everything into a few brilliant words of wisdom would be a remarkable job for anyone. To say that safe lifting and back injury prevention is each individual's responsibility would probably hit the nail on the head. Of course, not all employees would be expected to be motivated to accept this responsibility, so it becomes management's responsibility to enforce safe lifting rules in the workplace. This too is a major failure in the workplace because most employers believe that nothing can be done about back injuries. Experience has shown that proper training in safe lifting techniques are extremely important, combined with back mechanics and knowledge of how the back works can go a long way to back pain and injury prevention. Back support belts and braces have their place, but they too are not the only answer. The most effective method of back injury prevention is motivation, cooperation, training and enforcement of lifting techniques on a daily basis. Proper exercise, nutritional support and diet also are key players in prevention. Management must take the "bull by the horn", provide adequate training and support for back injury prevention, including safety counseling and disciplinary action for those employees who continue to lift in an unsafe manner. Disciplinary action is clearly the last thing an organization would want to do, but if an employee isn't willing to cooperate in this massive effort, management has no alternative. Everyone must lift safely or else. No alternatives, no excuses, it has to be done by all employees, whether they're office, warehouse, sales, or whatever job they're assigned. Training, exercise, diet, back braces, knowledge, safe lifting technique, consultation with physicians,

rehabilitation efforts, insurance professionals, safety specialists, supervision, retraining..... it's a complex effort, but it will pay big dividends.

IF AN ORGANIZATION AND EMPLOYEES WANT TO PREVENT BACK INJURIES...

IT WILL OCCUR...

It takes effort, cooperation and enthusiasm to develop an effective program for back injury prevention. It's not an easy road and it will cost money to implement, but the money invested and the return on that investment is worthwhile. The time and effort invested by the employee also pays that employee a great dividend in a healthy back. If you open the "horror file" on those employees who have experienced back injuries, back surgery, lifelong pain and so forth, every one of these individuals would beg everyone to exercise, take back training and safe lifting training seriously because the alternative is just not worth it. Even those persons who may "malingering" and claim a back injury when they really didn't injure their back lose also. They may gain a few days/weeks off the job and some worker compensation benefits, but they too lose in the long run. That's a proven fact. It does come back to haunt them in the future. Take care of your back, keep it healthy, learn how to lift safely on every job and think about the job before you lift anything. With your knowledge of how the back works, you can always find the safe way to lift anything. That's the only way to go.

BASIC ELEMENTS OF A GOOD BACK INJURY PREVENTION PROGRAM

EMPLOYEE SELECTION PROCESS.

Consult with your legal and medical advisors relating to establishing procedures for employee selection, based upon the job they will be performing. If there is heavy lifting requirements, persons for this job should be physically able to perform the job. Discuss the feasibility of medical examinations before a person is hired. There is disagreement in the Safety community as to the effectiveness and economics of medical examinations of new employees. Discuss this with your medical and legal advisors that fit your company's needs.

THE WORK ENVIRONMENT Work activities should be properly planned to reduce back injury exposures. Look at all aspects of each job description and make changes where necessary, to reduce the potential of back injuries. Material flow, work station adjustments, mechanical aids, equipment, chairs, shelving and all the things that could contribute to a back injury.

JOB HAZARDS

Every safety engineer knows about Job Safety Analysis or Hazard Analysis. It's finding out what the employees do and how they do it and take action to reduce the hazards. Ergonomics plays a big part in prevention. Moving or changing work positions, materials, chairs, work tables or stations, ladders, step stools and even looking at the stature of the person performing the work. Look at the job, then reduce or eliminate potential hazards.

TRAINING AND SUPERVISION

The supervisor must be informed, knowledgeable and must enforce all safe lifting rules, policies and procedures. Educating the employee as to their responsibilities in lifting safely. Training is an on-going process and the supervisor has the most direct responsibility in back injury prevention. The enforcement of safety rules..... all safety rules is a major part of any injury/illness prevention program. It is management's responsibility to establish the rules and enforce the rules. It's the employee's responsibility to follow the rules. It's not illegal to have an injury, but the injury should be investigated and the cause(s) of the injury identified, then corrective action should be taken to prevent a similar injury from reoccurring.

ACCIDENT INVESTIGATION

THE PURPOSE OF ACCIDENT INVESTIGATION:

Millions of words have been written explaining the importance and purpose of accident investigation, but for the supervisor, they can all be summarized in one word-PREVENTION. An accident is "an undesired event that results in personal injury and/or property damage". Being "undesired" makes it something that must be prevented whenever possible. The purpose of accident investigation is to distinguish between "purpose" and "benefits". "Benefit is WHAT A SUPERVISOR GETS from investigating accidents, but the "purpose" is WHY THE SUPERVISOR DOES IT. There are many benefits, which will be given later, but only one purpose-PREVENTION.

WHY ACCIDENTS MUST BE INVESTIGATED:

Investigating accidents is a responsibility of all levels of management and a concern of every employee, but the supervisor's unique position gives him/her special priority and responsibility in this function. As the supervisor in the area where an accident occurs, the supervisor has certain qualifications and advantages other members of management do not have. The supervisor:

1. **Knows the most about the situation.** He/she has daily contact and familiarity with the personnel, machines and materials involved. The supervisor knows the standard practices and circumstances in the area, as well as the hazards.
2. Has a personal interest in identifying accident causes. To a good supervisor, these are not simply accident figures and statistics, they are the supervisor's people, machines and materials. Accident investigation focuses a welcome light on the conditions and hazards that could endanger the lives of the employees or damage equipment and material.
3. Can take the most immediate action to prevent an accident from recurring. Being in direct control of the people, procedures and property in the area gives the supervisor the advantage of taking immediate corrective action and the greatest opportunity for effective follow-up.
4. Can communicate **more effectively with the workers.** A worker may be employed by the company, but works for the supervisor. Employees know the supervisor is interested in safety and the supervisor speaks

the same "language" as the employees. In accident reporting, the employee can "tell it like it is" to a supervisor.

HOW ACCIDENT INVESTIGATION BENEFIT SUPERVISORS:

1. Prompt and thorough investigation is concrete evidence of a concern for your workers. As a supervisor you know how important the trust and respect of your employees is in getting your job done. Workers not only expect, but need, a supervisor who looks out for THEIR best interests.
2. Effective accident investigation increases production by minimizing time lost due to recurring accidents. This ties in directly with reduction of costs since accidents are not only time consuming, but expensive.
3. Since accident investigation and resulting prevention are tangible evidence of a supervisor's ability and efficiency they are increasingly becoming an integral part of performance evaluation. A good safety record speaks well of a supervisor's capabilities and has a significant influence on his promotional possibilities.
4. Conscientious investigation and meaningful corrective measures are the mark of a capable supervisor, one who is in control. It is tremendously important that workers feel their supervisor can "handle things". They take pride in working for someone who can do the job.

THE CRITICAL IMPORTANCE OF ACCIDENT REPORTING:

No matter how conscientious a supervisor might be, the supervisor cannot investigate an accident until he/she is aware of the accident. Accident reporting, including minor injuries, property damage, etc., must be reported when the accident occurs..... not days or hours later. There is no such thing as unimportant accidents. The immediate results, or effect, of the accident may be classified as minor, serious, or major, but this in no way means the accident itself is unimportant. The next time the odds may be different, and the result could be major property damage, serious injury or even a fatality. **FOR EVERY ACCIDENT TO BE INVESTIGATED, EVERY ACCIDENT MUST BE REPORTED.**

THE WHAT, WHEN AND WHY OF ACCIDENT INVESTIGATION:

An accident investigation is basically the supervisor's analysis and account of an accident based on factual information gathered by a thorough and conscientious examination of ALL factors involved. It is not a mere repetition of the workers explanation of the accident. True accident investigation includes the objective evaluation of all facts, opinions, statements and related information, as well as def-mite action steps to be taken to prevent a recurrence.

WHEN IS THE TIME FOR ACCIDENT INVESTIGATION?

The time for accident investigation is always as soon as possible. The less time between accident and investigation, the better the information, which can be obtained. Facts are clearer, more details remembered and the conditions are nearest those at the time of the accident. The only situations, which should be permitted to delay the investigation, are when medical treatment is needed, or the work is emotionally upset. Naturally the supervisor thinks of the employee first.

WHY ARE ACCIDENTS INVESTIGATED?

All that is needed to remember the purpose of accident investigation is prevention. Your purpose in conducting an accident investigation is not to pin blame on someone, or to satisfy YOUR supervisor, but simply to prevent a recurrence of the accident. If this is constantly kept in mind, it will help your investigations immeasurably.

CONDUCTING THE ACCIDENT INVESTIGATION:

INTERVIEW THE WORKER WHO HAD THE ACCIDENT.

The first step in a normal accident investigation is to interview the employee involved. There are certain proven techniques for successful interviewing of any kind, and while most supervisors may be familiar with them, they are certainly important enough to repeat.

1. Put the worker at ease. Remind the person that you are interested SOLELY in preventing a recurrence of the accident and that you can only do this with the employee's cooperation.
2. Conduct the interview at the scene of the accident whenever possible. It will help the person to explain and for you to understand. Make the interview as private as you can.
3. Ask for the employee's version of the accident. Be sure he/she understands you want his/her version, just as the employee saw it and not "dressed up".
4. Ask any necessary questions. Limit your questions to facts, particularly early in the interview. Use the guide of asking who, what, when, where and why of the accident.
5. Repeat the story as you understand it. The employee can clarify or modify your understanding if there is any confusion.
6. Close the interview on a positive note..... PREVENTION. The most effective way to end an interview is by

discussing actions that can be take to prevent the accident from happening again. This re-affirms the purpose of the interview in the employee's mind and will assure continued cooperation.

RE-ENACTMENT OF ACCIDENTS

Re-enacting the accident is done by having someone, preferably the person who had the accident, demonstrate, or act out, what was being done, and how, when the accident happened.

COMPLETING THE ACCIDENT INVESTIGATION REPORT

An accident investigation report is just what its name implies, the report of an accident investigation. It is not the accident investigation, but a report of the findings from the accident investigation. While this may seem clear enough, the two are frequently confused. Filling out a form is NOT an accident investigation. The form is completed as a record of the actual investigation. Accident investigation report forms may differ from company to company, but the information they ask for is fairly standard. The reason for this similarity is that experience has proven certain facts are needed in any accident investigation if it is to be effective. In general, every report form will ask:

1. Who had the accident?
2. When did it happen?
3. Where did it happen?
4. What is the occupation of the person involved?
5. What inflicted the injury or damage?
6. Who had the most control of what inflicted the injury or damage?
7. What happened?
8. at things caused the accident?
9. How can the accident be kept from happening again?

DUTIES AND RESPONSIBILITIES OF TOP MANAGEMENT

Top management's responsibilities are the same as those of middle management in providing an example in the areas of interest and attitude. The only significant difference is one of degree. Because of their larger areas of responsibility, their potential effect (positive or negative) is even greater. Whenever possible, top management

should conduct follow-up hearings on selected major injury or property damage accidents promptly after middle MANAGEMENT'S hearings. Every member of the management TEAM is a link in the chain of accident investigation and any schoolboy knows what determines the strength of a chain. When top management is involved in the process, the process will produce results. If "filling out the form" is the best you can do, the process will not produce results.

THE IMPORTANCE OF BACK INJURY INVESTIGATION

Routinely, supervisors investigate back injury claims by simply asking the employee how they hurt their back.

This is not accident investigation. Back injury claims must be thoroughly investigated.

The first concern is for the employee and if warranted, professional medical attention should be provided.

If the injured employee is available, the accident scene should be the first place to begin the investigation.

The old familiar questions to ask at the scene of the accident are:

1. **WHO: Who had the accident (the employee).**
2. **WHAT: What was the employee doing at the time of the injury. What specific materials was the employee using/handling at the time of injury.**
3. **WHEN: When did the accident occur.**
4. **WHERE: Where specifically did the accident occur.**
5. **HOW: Explain specifically what the employee was doing and how the employee became injured.**
Obtain as much detail as possible.
6. **WHY: Why does the employee believe the accident occurred. Obtain his/her description of what went wrong. Was it the result of a physical hazards, too heavy a load to lift, awkward position ... whatever reason the employee believed contributed to the accident.**

Obtain the names and statements of any person who witnessed the injury, or had knowledge of what was occurring at the time of the incident. What did they see, what are the facts (as they view it) surrounding the injury.

THE MORE DETAILED AND THOROUGH THE INVESTIGATION, the more information you will

have to make a determination as to the cause or causes of the accident and be able to provide preventative measures for eliminating a similar in the future.

NOTE: In almost all cases, at least one cause of a back injury can be related to the unsafe act or unsafe behavior of the employee. Unsafe lifting, not watching where the employee was walking, poor footing, tripping over an obstacle on the floor, lifting too heavy a weight, etc.

IN ALL CASES WHERE THE EMPLOYEE CONTRIBUTED TO THE BACK INJURY, A SAFETY COUNSELING SHOULD BE PROVIDED THE EMPLOYEE.

THE VALUE OF A WRITTEN COUNSELING

In the context of SAFETY, a written counseling for violation of safety rules, unsafe acts or unsafe behavior is of unparalleled value. To ease the temperament of the person receiving a written counseling for safety violations, the best thing to do is call the written counseling a "SAFETY COUNSELING". No one wants to get a **disciplinary written counseling** in their file, however, if you retitle it: **Safety Counseling**, it becomes a bit more palatable to the employee.

Develop a **SAFETY COUNSELING POLICY** and train management/supervision how to perform Safety Counseling. After the policy is in place and management/supervision has been properly trained, the next step is to advise employees of the program.

A. The Company policy should define the purpose of a Safety Counseling, which is to advise the employee of what he/she did wrong, so corrective action can be taken **BY THE EMPLOYEE**, so as not to repeat the same or similar incident from occurring again.

B. The Company policy should define some of the Safety violations that would warrant the issuing of a Safety Counseling. (Unsafe acts, such as horseplay, not following proper procedures, working in an unsafe or unhealthy manner, negligence or other similar behavior). Should an employee **CONTRIBUTE** to an accident, injury or illness, through this unsafe behavior, a Safety Counseling would be warranted. The word **CONTRIBUTE** is used, as many accidents/injuries may have more than one **cause**. One cause could be a

physical hazard, but **part of the cause** of the accident could have been an unsafe act of the employee. Dual causes of accidents are not uncommon.

C. Make it clear that the Company is not issuing a Safety Counseling because a person experiences an injury or illness. (In California and many other states, this is a misdemeanor and not permissible. You can't "punish" someone for experiencing an injury or illness). The Safety Counseling is only used **when an employee contributes to an injury or illness by demonstrating UNSAFE/UNHEALTHY ACTS/UNSAFE BEHAVIOR**. Employees should be provided training to make sure they understand what an unsafe act/behavior and how that act/behavior can result in a Safety Counseling.

D. The Company and employees should view Safety Counseling as **training**. If an employee contributes to an accident, injury or illness through unsafe acts/behavior, the Company HAS AN OBLIGATION AND DUTY to explain what that unsafe act/behavior was, or the employee may continue the same behavior over and over. If the employee is not told, how can the employee be expected to correct the behavior?

E. Why a **WRITTEN COUNSELING?**

(1). Legally, under OSHA standards AND court actions, a company must PROVE that safety rules are enforced by the Company. Without written documentation, there is no proof.

AN EXAMPLE: A company has been in business 10 years, experiencing some injuries every year. The company is taken to court for some legal action involving safety. The plaintiff says safety rules are not enforced equally and equitably. The defendant, the company states they are. The Judge tells the company to prove it. Even though the company did experience accidents each year, they have no documentation to prove that rules were enforced.

(2). Cal-OSHA now requires documentation that safety rules are enforced, therefore, the best documentation is to show where employees violate safety rules, they are given Safety Counseling.

F. What about disciplinary action? The Safety Counseling is not intended to be disciplinary action, it is designed to be TRAINING for the employee. However, a Safety Counseling has the same effect as a written warning. The intention is to train the employee in what they did wrong (unsafe act/behavior), and to explain how to correct the unsafe act/behavior so it won't occur in the future. A piece of paper isn't a strong motivator for some employees, others it is a motivator. If an employee continues to demonstrate unsafe acts/behavior, formal disciplinary action can be taken, up to and including termination of employment, should the company so choose.

COMPANIES WITHOUT SAFETY COUNSELING:

Many supervisors hate to discipline employees. They hate to write down any counseling. More often than not, any type of counseling is accomplished informally, in the work area, and the employee views this type of "counseling" as unimportant ... and rightfully so. A verbal reminder doesn't have much impact on many employees, particularly when the verbal warning is informal and done casually in the work area. No big deal. If the supervisor takes the time to counsel an employee away from the job, such as in a private **office**, the counseling makes more of an impact. When the counseling is **written**, the impact is even greater. If employees know that the wrong behavior will result in a written counseling, the less likely they will be to demonstrate the wrong behavior. The which behavior is permitted and which behavior is not permitted.

THE FLIP SIDE OF SAFETY COUNSELING:

Supervisors have a tendency to "**blame**" all accidents and injuries on the employee, particularly, the old **phrase: "carelessness"**. What does the word careless mean? It doesn't **define** the cause of the incident. It doesn't explain what the employee did wrong. It's a very poor choice of words. What must occur after an "incident" is a thorough accident investigation to determine the cause or causes of the injury/accident/illness. If the employee caused or contributed to the incident, then the employee should learn what specific unsafe act was committed and what action should the employee take to correct this behavior. "Being careless" means

absolutely nothing. "Be more careful" means nothing. There is a specific cause for the incident, so it's up to the investigation to determine what that specific cause was, and how it can be corrected.

If employees know that unsafe acts/behavior will result in a **written** counseling, they will be more likely to work and act safely. It depends upon the emphasis management and supervisors give to safety. **If** the President of a company is a "neat/dean freak" and demands that the work areas are spotless, don't you think supervisors will be sure to keep their work area clean? The same applies to Safety. If the President gets involved ... don't you think Safety will receive some attention in the workplace? There was the President of a major food chain, who had been cited by OSHA for a serious injury involving the cardboard baling machine. Procedures were adopted, policies, training and the program was put in place. He went one step further and said that if any of his stores had an "incident/accident or injury" involving a baling machine, he was to be notified immediately and that also included after hours. How much attention do you think was paid to the cardboard baling machine safety program? What store manager would want to make the telephone call? Only the psychotic and mentally disturbed store managers. The others would have their priorities on cardboard baler safety ... at all times.

WHAT ARE THE EFFECTS OF UNSAFE ACTS/UNSAFE BEHAVIOR: Through the years, insurance and other accident statistics have shown that the majority (85-98%) of work related accidents and injuries are caused, in whole or in part, by unsafe acts of employees. It makes sense that any organization desiring to reduce their injury rate would target the **cause** of the majority of injuries? By simply enforcing safety rules and issuing Safety Counseling for those employees who demonstrate unsafe acts/unsafe behavior, companies can significantly lower their injury claims. If management is serious about safety, your employees also shall be serious about safety.

Safety counseling alone will not assure safety compliance, nor will it solve all your safety problems. Safety Counseling is one more tool to use, to reduce your injury rate and worker compensation claims. Safety Counseling (enforcement of safety rules) is **MANDATORY**, **if** you intend to **PROVE** that your company does, in fact, enforce safety rules.