

# ergodyne BACK

## guide

### Employee's Guide To A Healthy Back

Introducing BAC K, a back injury prevention program for the workplace. BAC K was designed for occupational athletes like you who use their backs on the job and at home. Just as professional athletes need to understand and care for their bodies, so do occupational athletes.

This comprehensive program will let you play an active role in your health and safety. By the end of your training sessions you should understand the four goals of BAC K.

**Build awareness.** You should be aware of the way your back works and of the causes and symptoms of back injuries.

**Accept ergonomic principles.** Look for ways to make your facility worker-friendly.

**Coach proper body mechanics.** A healthy back begins with proper lifting techniques and exercise. Train yourself to think before you lift and to stretch before you work.

**Key in on a total program** that includes Ergodyne® ProFlex® and WorkSmart® products to help reduce risk factors.

Use this guide to learn more about back safety. Read it, and then complete the quiz. If you have any questions about BAC K, contact your company's BAC K program consultant or your Ergodyne inside sales representative at (800) 225-8238.

### Did you know..

The back is the body part most frequently injured.

(Source: National Safety Council, *Accident Facts*, 1993)

Four out of every five people will experience back pain in their lifetimes. (Source: National Center for Health Statistics)

In terms of the number of lost workdays, back injuries are second only to the common cold. (Source: U.S. Department of Labor, Bureau of Statistics 1993 figures, the latest year available)

The ProFlex back support is a control measure designed to reduce the risk of back injuries. It provides support to the lower back and abdomen by transferring some of the stress away from these areas.

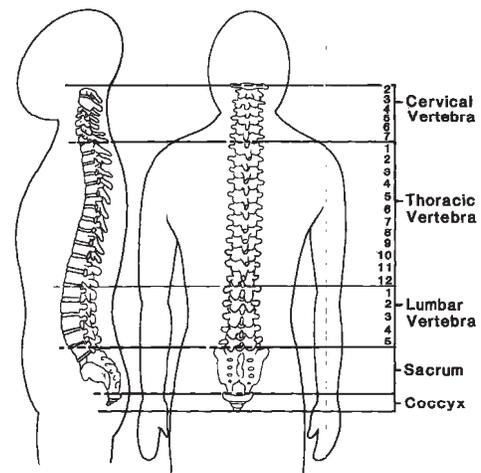
Back injuries can turn a normal life upside down. You lose time at work and you won't be able to perform everyday tasks at home. Lifting a bag of groceries, picking up your children, mowing the lawn or sitting through your favorite television show can become too painful. Even a comfortable sleeping position is difficult to find.

### Your Back

The purpose of the back is to support the upper body, protect your spinal cord and allow flexibility.

Most of the stress when lifting and bending is absorbed by the lower back. To take some pressure away from the spine, your abdominal and back muscles contract to give added support.

For example, when you lift a load, your abdomen and back muscles help equalize the effort so the entire weight is not transmitted to the spine, but is absorbed in the abdominal cavity. This is called intra-abdominal pressure.



## Causes of Back Injury

Improper lifting techniques  
Overexertion  
Poor posture  
Medical factors (age, other disabilities, etc.)  
Slips and falls  
Excessive weight  
Lack of exercise  
Stress  
Heavy purses and briefcases

## Symptoms of Back Injury

Symptoms of back injury vary depending on the injury and the person. More common symptoms include:  
Pain and tightness  
Spasms  
Decreased range of motion  
Numbness in the legs  
Limited ability to sit or stand

## Ergonomics

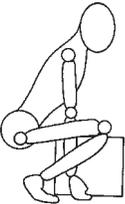
Ergonomics means designing the workplace to fit the worker. In other words, making your facility "worker friendly."

- Are the tables you work at too high or too low to comfortably fit your body frame?
  - Do you have to stretch to reach the items with which you work?
  - Does the location of merchandise keep you from using proper lifting techniques?
  - Is the temperature at a comfortable level so your hands don't become cold?
- Do you have tools that properly fit your hands? Are they well balanced and easy to hold?
  - Are they designed for the job that is being performed?
  - Do you hold on to objects for extended periods of time without relaxing your grip?

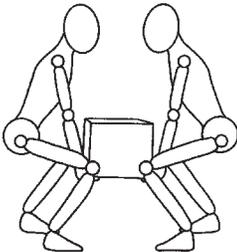
Look around your facility for areas that could be improved. Take an active role in your well being by communicating any problems to your supervisor.

## The Eight Commandments of Lifting

Use proper body mechanics when you are lifting, bending or pushing. Follow the Eight Commandments of Lifting (or the lifting technique preferred by your company) whenever you have to move a load. Think before you lift, and you will eliminate a lot of unnecessary pain. Pivot, don't twist to move objects. Lift smoothly, don't jerk the object you are lifting. Push, don't pull heavy objects. Move, don't over stretch to reach items on your desk or at a table. Sit and stand with your spine aligned, don't hunch over at your desk or stand in an awkward position.



**1. Plan your lift and test the load.**  
Before you lift, think about the item you are going to move and ask yourself: "Can I lift this alone? Is it too awkward for one person? Is the path clear?" Also, test the load to see approximately how heavy it is before lifting.



**2. Ask for help.**  
If the load is too heavy or too awkward for you to lift, ask for assistance.



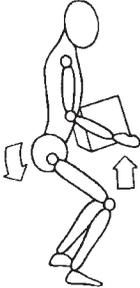
**3. Get a firm footing.**  
Keep your feet apart for a stable base and point your toes outward.



**4. Bend your knees.**  
Don't bend at the waist. Keep the principles of leverage in mind at all times. Don't do more work than necessary.



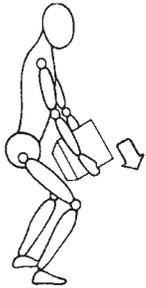
**5. Tighten your stomach muscles.**  
Use intra-abdominal pressure to support your spine when you lift, offsetting the force of the load. Train your muscles to work together.



**6. Lift with your legs.**  
Let your leg muscles do the work of lifting. Don't rely on your weaker back muscles.



**7. Keep the load close.**  
Don't hold the load away from your body. The closer it is to your spine, the less force it exerts on your back.



**8. Keep your back upright.**  
Whether lifting or putting down the load, don't add the weight of your body to the load. Avoid twisting.

# BACK Program Quiz

1. Four out of five people experience some sort of back pain in their lifetime.

- True       False

2. The purpose of the back is to

- A. support the upper body  
 B. protect your spinal cord  
 C. allow flexibility  
 D. all of the above

3. When you lift, your abdomen and back muscles help to take pressure away from your spine.

- True       False

4. List two causes of back injury.

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5. Ergonomics is

- A. something you learn in high school geometry  
 B. designing the workplace to fit the worker  
 C. a political party in West Germany

6. The first thing you should do before you lift is

- A. bend your knees  
 B. keep your back upright  
 C. plan your lift and test the load

7. For each of the pairs listed, circle the correct technique

Twist to move an item.  
OR  
Pivot to move an item.

Stretch to reach items.  
OR  
Move to reach items.

Lift smoothly.  
OR  
Lift with a jerking motion

Pull heavy items.  
OR  
Push heavy items.

8. What is the purpose of the ProFlex back support?

- A. to remind you to use proper body mechanics  
 B. to support your back and abdomen when you lift  
 C. to turn you into Arnold Schwarzeneger and help you lift heavier loads  
 D. answers A and B

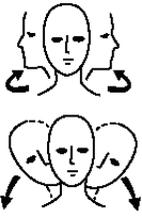
9. The ProFlex back support should fit snugly around your hips with the front of the support below your naval.

- True       False

Answers to the quiz: 1. True, 2. D, 3. True, 4. Improper lifting technique, overexertion, poor posture, medical factors, slips and falls, excessive weight, lack of exercise, stress, 5. B, 6. C, 7. Pivot to move to an item. Lift smoothly. Push heavy items. Move to reach items, 8. D, 9. True

There are other things that you can do to keep your back healthy. Eat right, sleep on firm a mattress and get some form of aerobic exercise three times per week, and you will be well on your way to a healthy back. Another important step to maintaining a healthy back is warming up before working. The following exercises can be performed before each work shift. Follow these tips while stretching. 1. Breathe/don't hold breath 2 Don't bounce 3 Go slowly/be relaxed 4 Hold each exercise for 10 seconds when it says "Hold."

## Standing



**Neck**  
Look over right shoulder as far as possible. Hold. Repeat to opposite side. Tilt your head to the right bringing your ear toward your shoulder as far as you can. Hold. Repeat to opposite side.



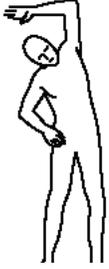
**Shoulders**  
Place left arm on back of neck. Grasp left elbow with right hand and gently pull so left arm moves down the back. Hold. Repeat to opposite side.



**Upper Back**  
Place right hand on left shoulder. Grasp under right elbow with left hand and pull right elbow toward left shoulder. Hold. Repeat to opposite side.



**Arms/Wrists**  
Interlock fingers over your head, palms facing upward. Push palms upward slowly as far as possible. Hold.



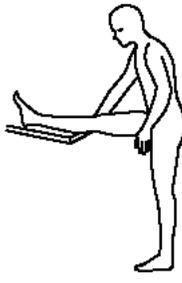
**Side Bends**  
Place right hand on right hip. Place left arm over head and slowly lean upper body to the right. Hold. Repeat to opposite side.



**Abdominals**  
Place palm on the low back. Slowly lean only upper body backward while arching your back. Do not move hips. Hold.



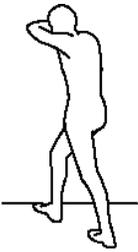
**Low Back**  
While keeping feet flat on the floor, slowly bend at the waist and knees and drop hips toward floor. Assume a squat position. Hold.



**Hamstring**  
Place right leg on stable object about waist high. Lean upper body slightly forward. Hold. Repeat to opposite side.

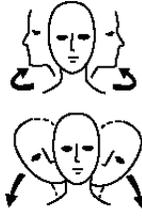


**Quadriceps**  
Grasp left ankle with left hand and slowly pull heel toward buttocks. Hold. Repeat to opposite side.



**Calf**  
Stand with right leg forward in a stride position. Keep heels flat on floor and left leg straight. Slowly push hips forward as far as possible. Hold. Repeat to the opposite side.

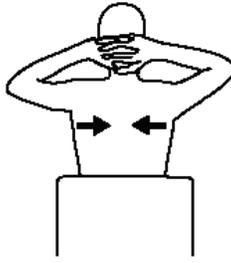
## Seated



**Neck**  
Look over right shoulder as far as possible. Hold. Repeat to opposite side. Tilt your head to the right bringing your ear toward your shoulder as far as you can. Hold. Repeat to opposite side.



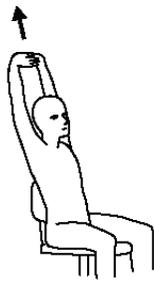
**Shoulders**  
Place right arm on back of neck. Grasp right elbow with left hand and gently pull so right arm moves down the back. Hold. Repeat to opposite side.



**Upper Back**  
Interlock fingers behind head with elbows out. Move elbows back as far as possible. Hold.



**Chest**  
Interlock fingers behind back. Slowly raise arms as high as possible while pushing chest forward. Hold.



**Arms/Wrists**  
Interlock fingers over your head, palms facing upward. Push palms upward slowly as far as possible. Hold.



**Side/Back**  
Cross left leg over right leg at the knees. Place right forearm on the outside of upper left leg. Turn upper body to the left while slowly pushing left leg to the right with forearm. Hold. Repeat to opposite side.



**Low Back**  
Sit as far back in your chair as possible. Slowly bend forward at the waist letting your upper body and arms move as close to the ground as possible. Hold.



**Hamstring**  
Sit upright in chair and place both heels on floor as far out in front of you as possible. While keeping legs straight, slowly slide hands toward toes. Hold.



**Ankle/Shin**  
Place right ankle on top of left knee. Grasp right toes with left hand and slowly pull toes toward left hip without moving right leg. Hold. Repeat to opposite side.



**Calf**  
Sit as far back in your chair as possible. Lift left leg straight out in front with toes pointed up at ceiling. Move toes back toward knee as far as possible. Hold. Repeat on opposite side.