

LOSS CONTROL



# BACK INJURY PREVENTION



This booklet is designed to help you understand more about your back. Along with the specific instructions you've been given by your doctor or therapist, it will help you take unnecessary pressure off your back. . . relieve discomfort. . . and avoid new problems.

The recommendations on appropriate therapy are those of the Spine Education Center, Inc., of Dallas, Texas - a nationally known training organization that has provided a great many back patients with the tools and knowledge they need to help control back pain.

By carefully following the advice given - and the recommendations of your doctor or therapist - you can go a long way toward helping your back problem get better. . . and stay better!

You hate to complain, but your back is giving you fits! While driving one day, a shooting pain crawled out of nowhere and headed straight up your spine. You are not alone! Seventy-five percent of the United States' population endures back pain at some time.

Anyone who wants to know how to avoid the pain, the costs and the misery associated with back problems needs to read this booklet. It is a wise investment in health, comfort and savings.

The booklet contains techniques for working on the job and in the home.

The suggestions in this book are not a substitute for your doctor's attention. Because back pain can be caused or worsened by medical conditions, call your doctor if no improvement occurs within two days. If the discomfort worsens, notify your doctor immediately.

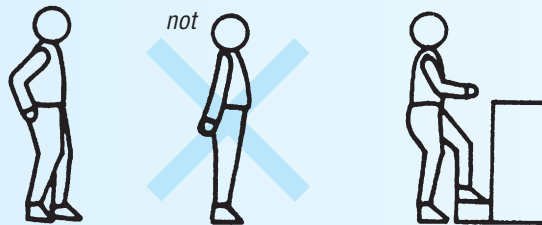
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# BASIC BODY MECHANICS

Body mechanics is a term used when describing an individual moving his/her body while performing any kind of task. It may be sitting at a desk, turning from a conveyor belt in a manufacturing plant, or performing household chores at home. You will be more efficient, more comfortable, and less prone to injury if you use good body mechanics.

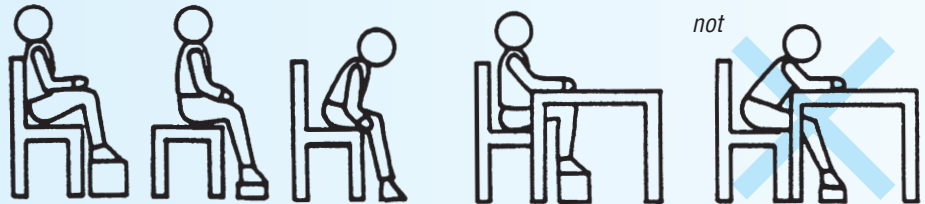
## 1. Standing:



One foot forward, knees slightly bent.

One foot up to change position.

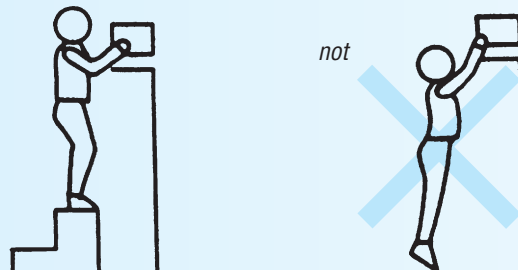
## 2. Sitting:



Upright or slightly reclined, knees higher than hips.

Get close to work with chair, not head.

## 3. Reaching:



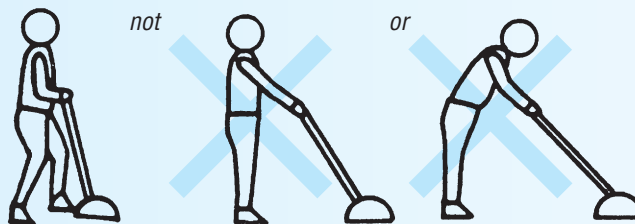
## 4. Brushing Teeth:



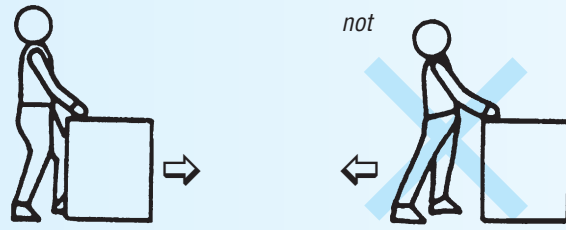
Bend and rest knees.

Open cabinet door, one foot up.

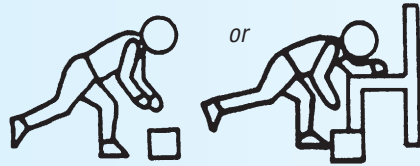
## 5. Weight Shift and Diagonal:



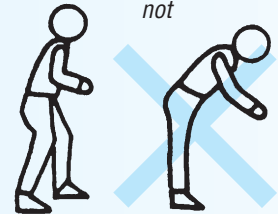
**6. Push More Than Pull:**



**7. Lifting:**



For light objects, counterbalance or counterbalance and bridging.



Partial squat.

**More Lifting:**



Full squat with one foot forward.



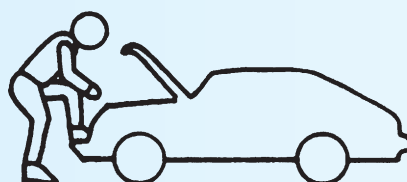
Keep load close.



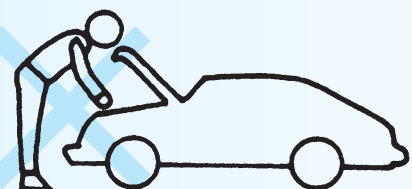
Shift weight to back leg before walking.



**8. Use Bumper on Car:**



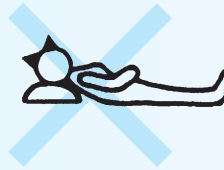
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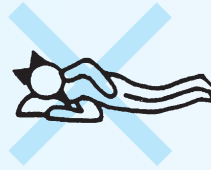
## 9. Sleeping:



*not*



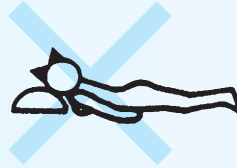
*not*



*or*



*not*



## 10. Resting:



This position is the most restful for your back. There is less pressure on your discs here than in any other position.

Use this resting position periodically during the day:

- When you feel your back begin to tighten.
- For 15 minutes after lunch to give your back a rest and a chance to relax.
- At home when reading or watching the news, or talking on the phone.
- Anytime.

Prop your legs on top of a chair, a couch, a table or a stack of pillows. Adjust the height to make your back feel good. Listen to your body, it will tell you what position is best for your back.

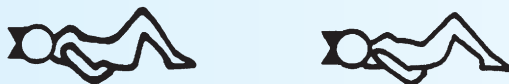
# GENERAL RULES FOR EXERCISES

Exercise is a safe way to stretch and strengthen your lumbar and abdominal muscles so they can more comfortably support and protect your lower back. Simple stretching exercises will help you to stay comfortable while performing tasks. If you are experiencing back discomfort, or you have experienced an injury, your physician may recommend exercises to help heal and strengthen your back. Follow his suggestion(s). Remember, if pain occurs, or if your back problems continue or worsen, stop exercising and see your physician.

1. Do each exercise slowly.
2. Do them 2 times a day.
3. Start with 5 repetitions of each and work up to 10 repetitions.
4. If an exercise increases your pain after 5 repetitions, rest for a minute, then do the pelvic tilt a few times, very gently. Try the other exercise again, very gently. If it still increases your pain, omit the exercise from your routine.
5. Exercise every day. For every day you do not exercise, you set yourself back 4 days in strength.

## Exercise Program:

### Pelvic tilt:



Lie on your back with knees bent so your feet are flat on the floor. Place your hand under your low back and press against your hand with the small of your back. You should feel your stomach muscles tightening as you flatten your back against the floor. In other words, your back goes in the opposite direction of arching.

### Modified sit ups:



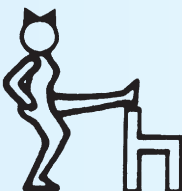
Begin as in the pelvic tilt. Keep hands by your side. Lift your head so your chin almost touches your chest. Lift your shoulders off the floor as you reach for your knees. Touch the top of your knees with your fingers, then lower your shoulders slowly to the floor. Keep your chin tucked!!! Then lower your head slowly to the floor. Be sure you do not arch your back during any part of this exercise.

### Double knee to chest or low back stretch:



Begin as in the pelvic tilt. Bring both knees to your chest, one at a time. Hug your knees tight enough to feel a mild stretch in your low back. Lower your legs slowly to the beginning position, one at a time. Be sure you do not arch your back during any part of this exercise.

### Hamstring stretch:



Stand with one leg propped on a table or back of a chair. Bend the leg you are standing on until you feel a mild stretch under your thigh.

**Sidelying leg raise:**



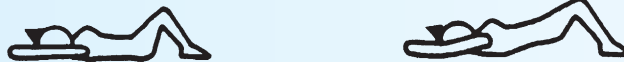
Lie on your side. Keep the top leg in line with your body. The bottom leg may be slightly bent. Raise the top leg straight up, slowly and lower it to the beginning position. Do this with the other leg also.

**Mountain and sag, knee to elbow:**

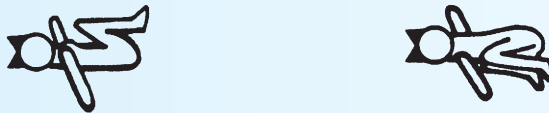


Start on hands and knees. Make a mountain out of your back, then let it slowly sag, like an old horse. Repeat 5-10 times. Bring your knee to your elbow, then straighten your leg behind you. Watch underneath and do not lose sight of your toes – you do not want to arch your back. Repeat with the other leg.

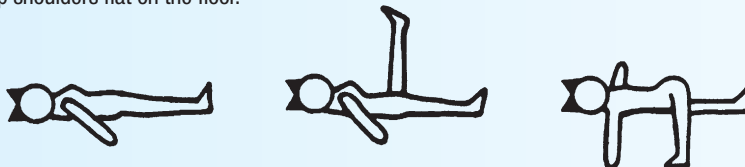
**Extra Exercise Program:  
Back Lying:**



**Full body stretch** – arms over head, toes pointed. **Bridging** – begin with knees bent and lift seat off floor.



**Hip roll** – knees bent on chest, lower them to the right side, back to the chest and then to the left side. Keep shoulders flat on the floor.



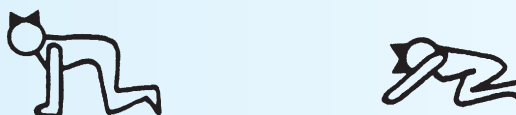
**Single leg roll** – with legs straight, raise one leg toward ceiling, then lower it to the opposite side. Return to straight up position, then lower leg slowly to the floor. Repeat with other leg opposite side.

**Prone:**



**Upper torso extension** – arms out in front, raise head, arms and chest. Raise right arm and left leg; reverse.

**On Hands and Knees:**



**Bowing** – begin on hands and knees. Sit back on heels, leave arms outstretched. Bend head down to knees.

**On Hands and Knees:  
(continued)**



**Racer's Start** – kneel on one leg, lean forward on other bent knee while first leg straightens out behind you.

**Sitting – For the neck:**

Sitting straight in comfortable position, turn head to left, then right, then left.

Turn head to left shoulder, then look straight down, then turn head up to right shoulder, essentially making a “U” with your head.

Tilt head so left ear almost touches the left shoulder. Repeat on the right.

Sitting straight, make circles with your shoulders. Reverse directions.

Make circles with your arms. Reverse directions.

**Water Exercises:**

With your back to the wall in a swimming pool, bring knees to chest and twist to the right and then to the left. Do all exercises 5 times and gradually work up to 10 times.

Bring your legs up so they are at a right angle to your body. Keep your knees straight as you spread your legs apart and then cross them like a scissor.

Turn with side to wall. Kick outside leg up in front, then behind, then out to side and down. Repeat on other side.

Facing bar, put both feet on bar, or rung of ladder. Bend and straighten knees.

With back to the wall, bicycle kick.

# DO'S & DON'TS WHEN YOUR BACK IS HURTING

## **Sitting:**

- When your back is hurting, avoid sitting. If you must sit, get up and move around every 20 minutes.
- Avoid sitting without back support and/or foot support.
- Avoid sitting with legs straight out in front, as in sitting in bed, in the bath or on the floor.
- Use a small towel roll or magazine roll behind your low back.
- When standing up, move to the edge of the chair, position one foot in front of the other, and use your legs to stand.
- Avoid leaning your trunk forward.
- Sitting with poor posture is certain to aggravate your back pain.

## **Driving:**

- When your back is hurting, try to avoid driving or riding for any distance.
- When driving, bring the seat up close enough to the wheel, so that your knees are slightly higher than your hips. Don't get so close to the wheel that you can't turn it.
- Use a towel roll or magazine behind your low back.

## **Bending Forward:**

- When your back is hurting, try to avoid bending forward at the waist. This increases disc pressure.
- Kneeling to make the beds and to reach low levels is a good alternative when you are hurting.

## **Lying:**

- A good firm support is desirable. The floor is too firm; a saggy mattress is too soft.
- When rising from lying, turn to one side, draw your knees up and drop your feet over the edge. At the same time, push yourself up with your arms and avoid bending forward at the waist.

## **Coughing & Sneezing:**

- When your back is hurting, stand up, if you can, and bend your knees. If a wall is handy, brace yourself against it.
- If you are seated and cannot stand, lean back in your chair.
- Always avoid leaning forward at the waist.

## When You Are Feeling Better

### **Sitting:**

- Sit with a lumbar support. You may also maintain the same position with your own muscles.
- Do the "mountain and sag" exercise for the low back while you sit to work out sore spots. Roll your hips back to curve your back and then roll your hips forward to straighten your back.
- Get up and move around every 30-45 minutes.
- If you are driving long distances, stop every hour or two to walk around. You may also put your hands in the small of your back and bend backwards, unless your doctor has warned you not to do so.

### Recurrence:

The next time you feel the warning signs of impending back pain:

- Use the first aid techniques - ice massage, anti-inflammatory and stretching - to get rid of any muscle spasms.
- Do the exercises which helped decrease the pain during the last episode.
- If the first aid regimen every hour does not help significantly in the first 48 hours, or should you experience a different back pain than before, or leg pain, see your doctor and follow his advice

# FIRST AID, HEALTHY EATING AND RELIEF OF STRESS

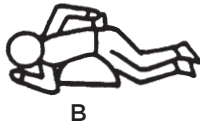
## First Aid: Ice Massage, Stretching and Anti-Inflammatory

### Ice Massage:

*When to do it:* When experiencing low back spasms or any level of discomfort in your back.

*What does it do:* Breaks the pain-spasm cycle between the nerves and muscles by slowing down the nerve impulses. Numbs that area and decreases the pain.

*How to do it:* Freeze water in a paper or styrofoam cup. Peel the top inch or two off the cup.



Either (A) lie on your stomach with a pillow under your stomach and have someone give you ice massage, or (B) lie on your side and give it to yourself. Gently massage a 4" x 6" area on one side of your spine where you think the pain starts, but not directly on the bone.

*How long:* For 5-7 minutes. No longer than 7 minutes. You do not want to get frostbite.

### Stretching:

Immediately after the ice massage, lie on your back and bring your knees toward your chest. Hold them there for 3-5 minutes. This stretching will help the low back muscles.

### Anti-Inflammatories:

Anti-inflammatories will decrease the inflammation present in the tissues. Use the dose on the label. Should you experience stomach upset or ringing in your ears, discontinue use. Tylenol is not an anti-inflammatory. If you have a history of ulcers, **DO NOT TAKE ANTI-INFLAMMATORIES WITHOUT CONSULTING WITH YOUR DOCTOR.**

## Hints for Healthy Eating

- A glass or two of water before a meal will dull your appetite.
- Try to eat fairly regular meals.
- Eat slowly – take small bites.
- Don't talk about your diet at meal times.
- Use small size plates to make small portions seem larger.
- Keep busy so boredom will not tempt you to eat.

- Eat less – exercise more, at least 15 minutes each day.
- Plan your diet and exercise routine with your doctor.
- Plan a diet you can live with, then stick to it for the rest of your life.
- Plan some exercise that is fun and enjoyable – take a walk.
- Have a supply of healthy snacks ready when you feel the urge to eat between meals – these will be better for your family, too.
- Drink skim milk in place of whole milk – it has half the calories.
- You can panfry meat or fish with a dot of margarine or butter and 2-3 tbsp. of water.
- Soft butter or margarine spreads better and further on bread or vegetables.

## Steps for Relaxation and Relief of Stress

Plan on 20 minutes of isolation. Get comfortable; take the phone off the hook; lock the door; turn off the television or radio.

Begin by focusing at a spot on the wall. Stare at this spot intensely and at the same time put all other things out of your mind. Really concentrate on the spot.

When you feel tiredness in your eyes, allow them to close on their own. Do not force them. After your eyes close, begin to think about your breathing. Take deep breaths from the very bottom of your stomach. You will notice that your outgoing breathing is cleaning the tension away, all of the tension in different parts of your body. Start with your toes and work up to your shoulders. Then go back to the fingertips and focus on the different parts of the arm and come back to the shoulders. Then go to the neck, jaws, eyes and the top of the head. Concentrate on breathing and relaxing.

You may feel body warmth while practicing this technique; a relaxed state may raise your body temperature because of improved circulation.

After you feel the blood freely circulating and the tension has left your body, slowly open your eyes. Try to maintain that relaxed state as you open your eyes and continue it throughout the day.

Practice this relaxation technique at least once a day. Schedule this exercise as top priority. Results will be a happier, healthier you!

*by Frank Lawlis, Ph.D.*

# RECREATIONAL DO'S & DON'TS

## **Fast Walking**

Great exercise! Disc pressure is 1-3 pounds greater than when you stand. Start with a short distance and gradually increase the distance every week. Make your goal 2 miles in 30 minutes, it takes 6-8 weeks to work up to that goal!

### *Remember*

Anytime you suddenly increase your activity, you are going to get sore. Keep exercising. You will work the soreness out as you increase your strength and flexibility. Use ICE if the soreness is too great!

LISTEN TO YOUR BACK!

## **Cycling (Outdoor or Stationary)**

Adjust the seat so you do not have to stretch your leg to reach the pedal.

Raise the handle bars so you do not have to bend over so far. But, remember, your arms are supporting your trunk.

LISTEN TO YOUR BACK!

## **Tennis Racquetball**

Plan with someone who will let you take it easy at first. Lob the ball for the first 3-4 weeks while you are getting into condition.

Keep your knees bent when you serve.

Stay on your toes . . . keep your body weight on the balls of your feet. This will lead to pivoting. Always pivot, never twist.

Warm up and cool down with stretching exercises.

### *Remember*

Competition adds stress to your muscles. Stay loose, stretch slowly to warm up.

Tired muscles are more susceptible to injuries. Rest by walking around or if you can, lie down and put your feet up. TRY NOT TO SIT after a vigorous activity.

LISTEN TO YOUR BACK!!

## **Bowling**

Bend your knees; do not twist.

Add support with a hand on your knee.

### *Remember*

If you are right-handed, the right side does all the twisting. EQUALIZE the stress by warming up with the other hand holding the ball. You do not have to release the ball, just swing it on the other side of your body to even out the stress.

LISTEN TO YOUR BACK!!

## **Baseball, Softball**

Warm up and cool down with stretching exercise.

Pivot on the balls of your feet when batting.

Wear knee pads to catch grounders. You will be more likely to squat.

LISTEN TO YOUR BACK!!

USE GOOD BODY MECHANICS

The information provided in these materials is of a general nature, based on certain assumptions, and is intended as background material. The content of these materials may omit certain details and cannot be regarded as advice that would be applicable to all businesses. The background presented is not a substitute for a thorough loss control survey of your business operations. Readers seeking resolution of specific safety issues or business concerns regarding this topic should consult their professional safety consultant. We do not warrant that the implementation of any view or recommendation contained herein will result in the elimination of any unsafe conditions at your business locations or with respect to your business operations. Further, we do not warrant that the implementation of any view or recommendation will result in compliance with any health, fire, or safety standards or codes, or any local, state, or federal ordinance, regulation, statute or law (including, but not limited to, any nationally recognized life, building or fire safety code). We assume no responsibility for the control or correction of hazards, and the views and recommendations contained herein shall not constitute our undertaking, on your behalf or for the benefit of others, to determine or warrant that your business premises, locations, or operations are safe or healthful, or are in compliance with any law, rule or regulation.

