The lifestyle changes recommended in this booklet are helpful for people with a history of neck and/or back pain. Maintaining these healthy habits will help decrease the potential for future spine-related problems. People with neck pain will especially benefit from the recommendations on pages 3-4 and 10-11.

**BODY MECHANICS BASICS**

1. **Test the load.** Before you lift, check the weight and make sure you can lift it safely. If not, get help or use an assistive device.
2. **Keep your back in its natural curve.** Bend at the hips and/or knees. With the low back erect, the forces are distributed safely.
3. **Maintain a wide base of support.** A solid and wide base will help reduce the possibility of slipping.
4. **Hold objects as close to you as possible.** This reduces stress on the back.
5. **Do not twist when carrying.** Move or change directions with the feet. This decreases the stress and load on the back.
6. **Tighten stomach muscles when lifting.** This prepares the abdominal area to help in the lift and reduce strain on the low back.
7. **Think before you lift.** First think how you will lift the object. Plan the path and make sure it is clear.
8. **Lift with the legs or the large muscles.** Using the large muscle groups helps to diminish the forces on the low back.
9. **Maintain good communication if two or more people are involved.** Good timing on a lift reduces the likelihood of jerky or sudden unexpected movements.
10. **Move obstacles out of the way.** Making sure the path is clear (clearing away toys, tools, loose rugs, etc.) decreases the risk of slipping or falling.
11. **Push rather than pull.** It is easier to utilize your weight advantage when pushing.
12. **Eliminate repetitive lifting duties if possible.** Place things or supplies that you constantly need or use at a better initial height to decrease lifting activities.

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BED MOBILITY

Many back pains come from improper body mechanics during daily activities. If you currently have back pain, there are several ways of getting in and out of bed to decrease the discomfort while you are healing.

To move from lying on back, bend knees up and roll to your side. Slide legs off edge of bed with knees bent. Push up with your arms, using the legs as a counter weight and sit up.

You can make a roll with a towel and put it in your pillow case to support your neck. Find the thickness that works for you.

To move from sitting to lying down, reverse the procedure. Begin sitting on bed. Lower yourself down on to your side, using your arms to help guide and control the movement. Once you are lying on your side, you may slide the legs up onto bed. To roll over on your back, keep knees bent and roll onto back.

PROPER SITTING AND STANDING POSTURE

Improper posture can create many types of back pain. The spine has three natural curves: one in the neck, one in the mid back, and one in the low back. It is important to maintain these curves so the body stays “stacked up” properly. When an improper posture is maintained for extended periods of time, the muscles can become weak and fatigued, resulting in burning or sharp pain, headaches, as well as muscle spasm. Some muscle groups become overstretched while other muscle groups become shortened. The ligaments (tough cord-like tissues that provide stability for the spine) also can become irritated with improper posture, resulting in back aches and stiffness. This abnormal posture condition is called postural dysfunction.

Postural dysfunction and its symptoms can generally be resolved with proper treatment. Therapeutic exercise is used to stretch the short muscles and provide strengthening and endurance to the weak muscles. Instruction is provided on proper posture and how to avoid further episodes of pain.

Other forms of treatment may be used along with exercise and education. These “modalities,” such as moist heat, electrical stimulation, ultrasound and deep tissue massage, help to relieve the symptoms until the muscle imbalances can be corrected.

Following are examples of proper and improper posture. You should try to attain proper posture as often as possible during your day. At first your muscles will not have the endurance to keep your posture correct all day, but as you begin using proper posture more frequently it will become easier. You will find your pain and spasms begin to diminish.
The Basic Rules of Posture are as follows:

- The head should sit directly over the neck, chin tucked in slightly and not jutting forward. The ears should be over the shoulders.
- The shoulders should be level and “squared” back, not slumped or rounded forward.
- The mid back should be straight up and not slumped forward.
- The hips should be in line with the shoulders and the ankles should be in line with the hips.
- When sitting, the hips and knees should be at 90-degree angles.
- A lumbar support can help maintain a natural curve in the low back.
PUSHING, PULLING, AND CARRYING

It is always better to push than pull. Before pulling anything, try to think of a way to push it first.

Pushing

First, test the load to see how easy it is to push. Make sure the path is clear. Stand facing the object, placing the hands on object. Place one leg behind the other. Bend the knees and keep the back straight. Tighten the abdominal muscles and slowly push with the arms and legs. Once moving, continue to push in a slow and steady manner. When ready to stop pushing, slowly ease up and return to a standing position.

Pulling

Remember, FIRST TRY TO THINK OF A WAY TO PUSH. If pushing is not an option, then pull with caution and try to find help.

First, test the load to see how easy it is to pull. Make sure the path is clear. Stand facing the object, placing the hands on object. Place one leg behind the other. Bend the knees and keep the back straight. Tighten the abdominal muscles and slowly pull with the arms and legs. Once moving, continue to pull in a slow and steady manner. When ready to stop pulling, slowly ease up and return to a standing position.

Carrying

When carrying things like boxes or other items that can be held, hold the object close to trunk. Do not twist body.

If carrying things like suitcases or handbags, observe the following rules:

- Try to carry equal weight in both arms.
- When picking up the bags, keep back straight and bend at the knees.
- Do not twist while carrying the bags.
- Lower bags by bending knees, not the back.
LIFTING OPTIONS RELATING TO DAILY TASKS

Following are examples of different lifting situations that you may find yourself facing in everyday life. These illustrations may help to demonstrate the concepts of proper body mechanics.

Reducing the Load

When possible, it may be better and easier to break up the lift into several smaller lifts, such as with a box of books.

The Basic Squat Lift

This lift is useful for something of moderate size and weight such as a laundry basket, a box of clothes, or a bag of groceries.

Begin standing close to the object to be lifted. Squat down, keeping the back straight and firmly grasp the container. Pick the container up and hold close to body as you tighten the stomach muscles. Next, stand up slowly and smoothly letting the large leg muscles do the work.

The Half-Kneel Lift

This lift may be helpful with things that have an irregular shape or tend to move as you lift. This might include a small fan, a small pet, or a small child. This lift can also be useful when lifting objects from a low shelf or table.

Stand close to the object to be lifted. Squat down onto one knee. Keep the back straight, pick up the object, slide it up onto thigh and then cradle the object or child against body. Tighten stomach muscles and slowly stand, using the strong leg muscles.

The Standing Kneel Lift

This lift works well when moving objects from within a car such as a small child.

Stand close to car seat. Keep back straight. Kneel on inside knee. Tighten abdominal muscles and slowly grasp child in hands and carefully bring child to chest. Stand up slowly.
The Partial Golf Pickup

This is a good way to retrieve things out of a car trunk, grocery cart or washing machine. When lifting from a car trunk, prepare the object to be lifted by placing one leg on bumper, keeping back straight, and sliding package to the edge.

Place both feet back on the ground. Place one hand on the receptacle that you are picking up the object from (car or washing machine, for example). Reach in with arm, keep back straight and pivot at the hips while extending the opposite leg backwards. Grasp the object firmly, and slowly lift while straightening at the hips, pushing up with the other arm, and bringing the leg back down. Position the object close to body.

The Full Golf Pickup

This lift should only be done with objects that weigh only a pound or less. If you currently have a back injury, a weak back, had prior back surgery, a tendency to have back pain, or are pregnant, this lift should be avoided.

Keeping the back straight, pivot at the hips while extending one leg straight behind you as you reach down to pick up the object. As you pivot back up with the object, swing the straight leg back down.

The Over-Head Lift

This lift is used when lifting objects down from a high surface, such as a shelf. If the object is higher than head level, use a step stool.

Move close to shelf. Place one leg in front of the other. Shift weight slightly to the front leg. Reach up and firmly grasp object in both hands while keeping back straight. Slowly lift object off of shelf as you shift equal weight back onto both feet. Carefully lower object down to chest.
The Two-Person Lift

This is used when the object is either too heavy or too large, bulky or cumbersome for one person. This may be a table, a large box or a mattress. If the entire object cannot be held close to your body, or you have any doubt about safety, get help.

Both people stand on either side of object as close as possible. Communicate with each other as to who will count for the lift and in which direction you will go. The lift performed is the squat lift. Squat down, keeping the back straight and firmly grasp the object. The lead person gives a 1-2-3 count and both people lift on the 3 count by tightening abdominal muscles and slowly straightening legs.

BODY MECHANICS FOR COMMON ACTIVITIES

Using proper body mechanics can prevent back injury, help speed up recovery if you are already injured, and prevent further injury after your back has healed. Following are some suggestions for activities that you may use with daily activities.

When getting out of a car, first open the door completely, then swing your legs out to the side and pivot on the buttocks so your entire body moves as a unit. Do not twist your low back. Place one hand on the seat and the other hand on the car frame. Scoot forward and place feet under the hips, lean forward, and push with one hand while pulling with the other hand, and use the leg muscles to come up to a standing position. To sit down, reverse the procedure.
When retrieving things from a low shelf, instead of bending over and twisting, it is better to kneel down or squat in front of the shelf, pick up the objects holding them close to the body, and then stand up using the strong leg muscles and keeping the back straight.

Many activities require standing for a while such as brushing your teeth, ironing, washing dishes, or folding laundry. To avoid fatigue, try to break these duties up into smaller time periods. When standing, place one foot on a step or ledge. Do not bend at the waist; instead bend at the knees and keep back straight. To provide support, use one hand to brace yourself. Always try to do the activity at a comfortable height.

When doing activities that are above chest level such as washing windows, painting, changing light bulbs, or hanging pictures, ALWAYS USE A STABLE STEP STOOL so that these activities are at a better level. Another alternative is to use a long-handed reacher or brush.

When performing duties such as vacuuming, sweeping, shoveling or raking, do the following: stay close to the work area; use the arm and leg muscles while keeping the back straight; avoid twisting movements; and use body weight to help with the job.
ERGONOMICS

Ergonomics is the study of how to adapt the work place to the person. In other words, the work environment should be adapted to YOU, not the other way around. This is important because when the work station fits your needs, fatigue and stress decrease and your comfort increases. In the long run you are more efficient and you decrease your risk of getting a repetitive trauma disorder. An example of a repetitive trauma disorder is carpal tunnel syndrome or “tennis elbow” (tendonitis).

Repetitive stress conditions occur when tendons, muscles and nerves are placed under stresses and strains that at first seem very slight, but over time can eventually cause wear and tear to the soft tissues of our bodies. There are many different aspects of wear and tear, and if you can decrease or eliminate any of these aspects, then the risk for this type of injury can also decrease.

Since it is your body, it is your responsibility to try to identify these risks and take an active role in reducing the risks. Consider things like how much force is involved in a job, how long are you subjected to that force (not just hours in a day but how much repetition), what kind of rests you get, and how long you have to maintain static postures. Consider also environmental factors, such as lighting, vibrations and temperature. And finally, take into account your overall general health.

Following are some things you should evaluate about your job or duties, and suggestions of ways to adapt your work place. If you find there are some areas that may place you at risk, contact your employer or health professional to arrange getting things changed.

- **Are you using proper body mechanics?** If not, obtain information on proper body mechanics and use the concepts during activity.

- **Are you keeping the tools that you need within close and easy reach?** If not, rearrange your space or hang tools up so everything is convenient to reach.

- **Are you using the correct tools?** Do they fit your hands properly and are they padded if there is vibration involved? If not, check with your supervisor to have the proper tools and any needed accessories issued to you.

- **Are you taking regular and periodic breaks so your hands and body are not subjected to too much fatigue?** If not, plan and implement consistent yet short breaks throughout the day, perhaps using a timer so you don’t get excessively involved in the activity and forget to take rest periods.

- **Are you eating proper meals and maintaining a regular exercise program?** If not, consult with the appropriate health professional regarding proper diet, basic exercises and stretches, as well as getting enough sleep and rest.

- **Is your computer or desk station set up so that you have good posture, and that you are not always twisting in one direction over and over?** If not, examine the diagram on the next page to make sure the chair and desk station are set up correctly. Be sure there is proper lighting.
A) Hips and knees should be at 90 degrees, feet flat on floor/footrest.
B) Shoulders should be relaxed (not elevated) and elbows should be held at 90 degrees.
C) Monitor should be at eye level.
D) Keyboard should be positioned so wrists are not bent up or down or twisted.
E) A lumbar roll or support should be used to provide low-back support.
F) If you do other types of desk work, tilt the work up instead of lowering head and neck.

If you have any questions, consult your doctor or health professional.

**SLEEPING ADVICE**

When you have back pain, sleeping can be very difficult. For this reason, how you sleep can have a great impact on your rest and recovery. Following are some suggestions you may try, which may help to give relief during your sleep:

- Sleep on a firm and flat mattress.
- If you have had a recent injury you may be advised to stay in bed and rest flat on your back. This should be limited to only 1-2 days. After that time you should try sitting occasionally and participate in short walks.
- While sleeping on your back, it may help to place a pillow under your knees.
- If sleeping on your back is too painful, try lying on your side with your hips or knees slightly bent. Placing a pillow between the knees may also help.
- While lying in bed, do not raise your arms over your head.
- If your bed is too soft, it may help to place a piece of plywood between the mattress and springs. 5/8 or 3/4 inch should work fine.

**SLEEPING TIPS FOR NECK PAIN**

- Sleep on your back or your side.
- Your pillow should keep your neck and spine in a straight, aligned position.
- If you sleep on your back, your pillow should fill in the “hollow” or curve of your neck. It should not push your head forward, up or in a tipped, backward position.
- If you sleep on your side, your head should not tip down toward your shoulder. Your pillow should fill the height between your shoulder and the mattress.
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