

## POSTURE, BODY MECHANICS and BASIC LIFTING TECHNIQUE

### THE MOST COMMON CAUSES OF BACK INJURIES

- Poor posture
- Poor body mechanics
- Poor lifestyle choices

### PROPER POSTURE

- Standing
  - Ears, shoulders, hips, knees and ankles are “stacked” in a straight line
  - Shoulders relaxed
  - Knees slightly bent
  - Maintain the three natural curves
- Sitting
  - “Stack” ears over shoulders over hips
  - Buttocks should be all the way back in the chair
  - Feet should rest on the floor or footstool
  - Maintain the three natural curves
  - Use a lumbar roll or rolled up towel between your lower back and the back of the chair
  - Sitting actually puts more pressure on your back than standing does, so look for ways to stay in motion all day long, for example take frequent short walks throughout the day
- Lying down
  - Rest on your side with knees slightly bent toward your chest
  - Lie on your back with a pillow beneath your knees
  - More than one pillow under your head can cause increased curve for your neck placing stress on your neck and back.

**To prevent low level, repetitive back injuries, you need to take responsibility for your health. Make new proper posture a healthy habit.**

## **PROPER BODY MECHANICS**

- The way you choose to move your body
- Utilizing good posture when moving
- Maximizing the use of the strongest areas of your body and minimizing the use of weaker ones.
- For example: the legs are designed for power. The spine is designed for mobility. In order to lift a heavy load, and protect the spine, you must position your back in a good posture and tighten the muscles for support before lifting with the strong muscles in your legs.
- Use of good body mechanics protects the back by keeping the spine in good alignment supported by strong abdominal and back muscles and places the weight of the object and the force needed to lift on powerful buttock and leg muscles.

## **LIFESTYLE CHOICES**

- Diet: A poor diet may result in an increase in weight. Excess weight can pull your spine out of alignment and cause back injury. See your physician or a dietician for counseling about proper eating habits for you.
- Exercise: Lack of proper exercise may lead to increase weight gain, as well as weakness in muscles, and lack of flexibility needed to perform daily tasks properly. Regular exercise decreases your risk of back or neck injury. A regular exercise program can help increase your flexibility, improve your strength and stamina, and help you relieve stress. See your physician or a physical / occupational therapist for an individualized exercise program.
- Stress management: Stress creates muscle tension, which causes a decrease in flexibility leading to back pain.
- Smoking: Smoking prevents your blood from delivering enough oxygen to the tissues in your body resulting in weakened muscles.
- Choose to use good/poor posture daily. It is very important to maintain good posture at all times and to develop strong muscles to support the demands placed on your body during these procedures.
- Choose to use good/poor body mechanics with everyday activities including lifting

## BASIC PRINCIPLES OF BODY MECHANICS FOR LIFTING AND TRANSFERRING

- Explain what you are going to do and ask the person to help: If the person is able to bear weight or assist with the move, encourage them to do so. Explaining each step of the procedure will help relax the person, alleviate fears they may have, and reduce chances of injury.
- Test the weight: Proper to lifting or moving an object or person, test the weight of the load to make sure it can be moved safely. Always ask for assistance when lifting anyone or anything that weighs more that you can safely lift alone.
- Plan the move: Minimize the distance of the lift and clear the travel path. Be sure blankets, clothing, oxygen lines, bed control cords etc are clear. Lock brakes on wheelchair and remove foot rests and arm rests if possible. Remove throw rugs.
- Use a wide, balanced stance with one foot ahead of the other: Your feet provide the base of support needed for all other movement to safely occur. A solid base of support reduces the chances of slipping and jerking movements. Wear non-skid, supportive shoes. Position your feet shoulder width apart with one foot slightly in front of the other.
- Keep the lower back in its normal, arched position when lifting: Bend at the knees. With the back arched, the forces are more evenly distributed.
- Bring the load as close to the body as possible: Throughout the move, keep your arms and the object or person as close to your body as possible.
- Keep the head and trunk up: This helps to keep the arch in the lower back during lifting.
- Tighten stomach muscles as the lift begins: This helps to stabilize the lower back and pelvis.
- Lift with the legs and stand up in a smooth, even motion: When lifting you should maximize the use of the powerful buttock and leg muscles. If you bend at the knees and perform the lift with your legs, you decrease the amount of strain on the small muscles of your back. Use your whole body when pushing, pulling or lifting, not just your back and arms.
- Move your feet if a directional change is necessary: Throughout the move, your back, trunk and feet should all move together in the same direction going to the same place. When a turn is necessary, move your feet and take small steps instead of twisting at the waist.
- Communicate if two or more individuals are involved in the movement: This helps ensure the movement will be smooth, rather than sudden or jerking. Count out loud 1-2-3.
- Push objects rather than lift whenever possible.