

Body Mechanics When caring for a client

If assistance is needed, find out the client's strengths and weaknesses. Often one side of the body is stronger. The stronger side should be transferred first. When lifting, transferring, or carrying a physically restricted person, observe the following principles of body mechanics. Practicing them will help prevent possible strain or injury to your lower back, and will insure a safe lift for the person you are lifting.

LIFTING:

- First, plan the job.
- Make sure ample room is available for good footing, and the path is cleared for the carry.
- Stand so you will not have to twist as you lift.
- If the weight of the person is more than one-fourth of your body weight, you should get someone to help you. Also, get assistance if lifting the person is awkward.
- Your back should be kept as straight as possible.
- Lift by straightening your legs in a steady upward thrust and, at the same time, move your back to a vertical position.
- The weight of the person should be kept close to your body and over your feet.

CARRYING:

- Carry the person as close to you as possible.
- Keep your back straight, not arched.
- Do not twist. Change direction by taking small steps and turning the whole body at once.

LOWERING:

- Spread your legs to hip width, and lower the person between your feet.
- Hold your back straight and steady, even when you lean forward.
- Lower in a slow and even manner while bending your legs.
- Do not twist your body. To turn, move your feet.

TRANSFERRING:

Although some individuals who use a wheelchair have sufficient arm strength and coordination to transfer into and out of their chair by themselves, many will need assistance. Various types of transferring techniques can be used to move someone from one place to another when carrying is not necessary. The individual's weight and physical ability to help, as well as your own strength, are important factors in deciding which technique will be most appropriate. The individual will also be able to tell you

more specifically what seems to work best from experience. Several transfer techniques will be given in detail at the end of this section.

WHEELCHAIRS:

- Make sure the chair is locked when removing or seating the person.
- Pull the wheelchair backwards up steps or curbs.
- Adjust the height of the foot pedals so the person is sitting at a 90 degree angle at the hip and knee.
- When removing or seating the person, the following procedure is suggested as easy for you and most comfortable for the person: Before you begin, make sure you have put up the foot pedals or swung them out of the way. Place your arm around the person under his or her arm at the armpit. Place your other arm under the person's knees. Or face the person in the chair. Secure a hold under each arm, and lift the person out of the chair.

LIFTING AND MOVING (from bed to wheelchair):

- Always begin the lifting procedure by moving the person to the edge of the bed. First, move the upper trunk, then the legs one at a time. Repeat this until the person is near the edge of the bed. Repeated movement of the trunk and legs is easier than lifting the person as a whole all at once.
- Remember, bend from your knees, not from your waist. If you must bend from the waist, tighten your stomach muscles while bending and lifting. This reduces pull on the back muscles. Keep your back straight at all times. The following are step-by-step procedures which will make lifting and transferring safer and easier.

THE ONE-PERSON TRANSFER:

- Prepare for the lift.
- Place a gait belt around the person's waist.
- Place wheelchair at a slight angle to the side of the person's bed.
- 3. Lock both brakes on the wheelchair.
- Remove the armrest of the wheelchair on the side next to bed, if possible. This helps prevent bumping the person's hips or buttocks and allows for lifting without lifting too high.
- Swing away the leg rests of the chair. If leg rests will not swing away, lift the pedals to avoid interference during the transfer.
- If the person has a catheter, be sure the bag is lower than the bladder and that both bag and tubing are out of the way. (This applies equally to transfers from a wheelchair to a surface and from a surface to a wheelchair.)
- Stabilize the bed, so it will not move.
- Steps in the one-person transfer.

- Place the person's legs over the side of the bed with the knees near the bed's edge.
- Place the person's hands in his or her lap.
- Place your arms under the person's armpits and around the back.
- Raise the person to a sitting position on the side of the bed. Do not let go unless the person can sit alone without support.
- Gradually slide the person forward until the person's feet are flat on the floor. Place your feet in a "v" on both sides of the person's feet for support. Have your feet far enough apart to give you a good base of support. Your knees should be on each side of the person's knees.
- Have the person lean forward. If possible, place the person's arms around your shoulders. Allow the person to reach with an outside arm for the far wheelchair arm.
- Bend your hips and knees while keeping your back straight. Place your arms around the person's waist. Grip the person's belt on both sides toward the back with your hands. (If the person is not wearing a belt, a safety belt may be put on during the preparation stage.)
- Keep the person's knees stabilized. Count 1-2-3, then pull forward on the belt to lift the person.
- When the person is high enough to clear the armrest or chair surface, turn by taking small steps. Be sure to keep the person's knees blocked with your own knees.
- When turned, bend your hips to squat and lower the person to the chair's seat.
- Replace the footrests, then the armrest.
- Remove the gait belt, if necessary.
- Fasten the seat belt on the chair.
- Repeat the procedure from steps 5 to 11 when transferring from a chair to the bed or other areas. Remember to move any catheter bags or tubes out of the way prior to lifting.

Alternate lifts: use only to lift a very small person.

- Prepare for the lift by following the same procedure as outlined in steps 1-6 in the one-person transfer. 2. If the individual is totally incapable of assisting you and you are alone without another's assistance, follow the procedure listed below. (If the person is more than one-fourth of your body weight, try not to lift the person by yourself.)
- Move the person to the side of the bed in a lying position.
- Fold the person's arms across his or her chest.
- Place your feet far enough apart to give you a good base of support.
- Bend your knees slightly.
- Place one of your arms under the person's neck.
- Place the other arm under the person's knees.

- Using the strength in your legs, draw the person close to your body and lift up while keeping your back straight.
- Take small steps to the wheelchair. Remember to keep your knees bent. Carefully place the person in the seat of the chair.
- Check on the person's sitting position and adjust the wheelchair seat belt.
- Fasten the seat belt.
- Repeat the procedure to lift an individual from a wheelchair to another area (e.g., to a bed or couch).

THE TWO-PERSON TRANSFER:

Prepare for the transfer.

- Know where you are going to move the person.
- Prepare the wheelchair, tub, or bed prior to starting to lift the person.
- Be sure the wheelchair brakes are locked.
- Remove the wheelchair's armrest which is closest to the destination point.
- Swing away or remove the leg rests or lift pedals, if possible.
- If the person has a catheter, be sure the bag is lower than the bladder and that both bag and tubing are out of the way. (This applies equally to transfers from a wheelchair to a surface and from a surface to a wheelchair.)
- Stabilize the surface from which you are lifting the person.

Steps in a two-person transfer.

- The taller lifter should stand at the back of the person.
- The shorter person should stand on one side of the person.
- The lifter at the back should put his or her arms under the person's shoulders and around the person's chest with arms folded across the person's chest.
- The taller lifter at the back should then widen the base of support by spreading feet apart and bending slightly at the hips and knees. (Remember to not bend the back, but to use the strength in the hips and knees.)
- The shorter lifter at the side places both arms under the person's thighs in order to support the buttocks and lower legs. Clasp one hand to wrist for firm grip.
- The shorter lifter should also widen the base of support by spreading feet apart.
- Bend knees and hips slightly before lifting.
- Be sure the person being lifted keeps elbows next to the body or place arms and elbows in that position, if necessary.
- The taller lifter counts to three after which both lifters should straighten their hips and knees to lift the person in unison. Both lifters step to the transfer surface and place the person there. If the individual is being put in bed, repositioning for comfort may be necessary.

ACTIVE TRANSFERS:

The following transfers are performed by individuals who need little or no assistance. This type of transfer is known as an "active" transfer. The three commonly used active transfers for the aged and handicapped are the side, the walker, and the cane transfers. Procedures for these transfers are as follows:

- The side transfer: used by a person who is weak in the lower extremities. (This technique is described for a person moving from a wheelchair to the toilet, but may be used for bed to chair, chair to bed, or chair to tub seat.)
 - The person approaches the toilet at a 90 degree angle, or so the wheelchair makes an "I" with the toilet.
 - Locks the brakes on the chair.
 - Raises the pedals of the chair.
 - Places both feet flat on the floor about 12" apart.
 - Places both hands on the armrests of the chair and leans slightly forward over the knees.
 - Assumes a partially standing position by pushing with both hands.
 - Grasps the left grab bar with the left hand, or the right grab bar with the right hand, depending upon the angle of approach. (A grab bar should be available either on the toilet seat or on the wall beside the toilet.)
 - Takes small steps and turns slowly until standing with back to the front of the toilet.
 - Stabilizes before leaning forward and lowering to the toilet seat.
 - Transfers should be made toward the strongest side or to the side without an encumbrance, such as a cast. Improper transferring to the wrong side could cause falling and injury.
- An elevated toilet seat can help a person who has difficulty in transferring from a toilet to a wheelchair.
- In a bathroom with limited space, the person may be required to have the wheelchair facing the toilet. The person must, therefore, turn halfway around before sitting down.

The Walker Transfer:

Many aged persons need the aid of a walker for stability.

To rise, the person:

- Secures the wheelchair by backing it against a wall, if possible, and locking the brakes.
- Raises or swings the footrests out of the way.
- Places the walker in front of, and as close as possible to, the wheelchair.
- Moves forward to the front half of the wheelchair seat.

- Places both hands on the armrests of the chair. (Under no circumstances should the person take hold of the handles of the walker until fully upright. The walker will tip backwards easily.)
- Places feet flat on the floor and spreads them apart about 12" for a good base of support.
- Leans forward with shoulders directly above knees.
- Pushes with arms and legs to a standing position.
- Takes hold of the walker using one hand at a time. (Only after standing should the person reach to take hold of the walker.)

Stabilizes prior to walking.

To sit, the person:

- Approaches the chair from the side. (If using a wheelchair, the brakes need to be locked.)
- Turns until his or her back is facing the chair. (Only a quarter turn is required for the person to have his or her back to the chair. The person's strong side should be closest to the chair.)
- Backs up until the backs of the knees come in contact with the front of the seat.
- Reaches back with one hand at a time to grasp the wheelchair's armrests.
- Leans forward, bending the hips and knees to lower self into the chair.

The Cane Transfer:

Many aged persons use a cane for increased stability.

To rise with a cane, the person:

- Stabilizes the chair (especially a wheelchair) against a wall and locks brakes.
- Raises footrests or swings them out of the way.
- Places the cane in the hand of the strongest side.
- Holds the cane in the hand while grasping the armrest by the same hand. (If the hand opposite the cane is usable, the person grasps the armrest with it, also. When someone does not have the use of the arm opposite the cane, the person should lean forward over the knee on the side of the cane.)
- Moves forward in the chair to the front half of the seat.
- Spreads feet about 12 inches apart.
- Leans forward to shift weight.
- Pushes with arms and legs to stand.
- Brings cane up from the armrest.
- Stabilizes with the cane before proceeding to walk.

To sit with a cane, the person:

- Approaches the chair with the cane, placing the cane in front of the chair. This places the strongest side toward the chair.

- Turns until the back is fully to the chair.
- Backs up until the backs of the knees touch the front of the seat.
- Reaches back with both hands, if possible, and grasps the armrests.
- Holds cane with the armrest.
- Leans forward over both knees, provided both arms can be used. The person should lean over the knee on the cane side if only that arm is usable.
- Bends hips and knees to sit down.

Please remember that each individual situation is unique when applying these basic steps in transferring. Some situations will require other steps. The advice of an experienced person such as a nurse or physical therapist can be invaluable.

These are the basic safe steps for using a walker or cane. Depending upon the physical limitations of the individual, these steps should provide a safe transfer method. Be sure to check with the physically limited individual for other methods or adaptations which can also work.