BODY MECHANICS

The First Year Students of Nazareth School of Nursing, Mokama, and Sister Mary Stella discuss here the important aspect of body mechanics in the performance of Nursing duties.

I suppose all who have done the duty are tired. Your backs may be aching. You feel like legs are not strong; pretty sore and tired. Most probably the cause could be faulty body mechanics or poor posture. So, we have decided to show you the proper technique of body posture and body mechanics which are useful in performing our nursing duties. Once the techniques of duty mechanics are learnt well, they are of great value both for the physical appearance of the nurse and her care for the patients. Before we proceed let us look at the following definitions:

Posture—is the relationship of various parts of the body at rest or in any phase of work.

Good Posture—is the ability to handle the body easily, gracefully and efficiently under all circumstances.

Work Posture—is that position assumed to perform any given activity. This includes standing, sitting, walking, stooping, lifting, pushing, and pulling. The efficiency of work posture depends on good body mechanics.

Good Body Mechanics—means the coordinatnon of all body parts in an effort to produce action and at the same time maintain balance.

I. Learn the Principle of Good Body Mechanics

1. Here, our model demonstrates good posture. All of her body parts are kept on top of one another and her weight is distributed over a broad base. Such body alignment helps the weight bearing joints to function well mechanically, preventing damage to ligaments and other joint structures.

Remember: Stand straight feet kept slightly apart having one foot forward than the other. Keep your abdomen in and at the same time lower back down. Hands by the sides relaxed.

Good standing posture is the foundation on which more complex movement is developed.

2. Here are some points on how to use your good body posture in living and moving heavy objects. Your legs and not your back are the strong part of your body, when stooping to lift an object.

Lower your body to the floor by flexing your hips and knees. Do not bend forward from your waist. Keep the upper part of your body in good alignment. Maintain your balance by placing your feet so that the base is broad. Stand close to the object to be lifted. Tilt the pelvis as you lift the object and the work of lifting will be done by your legs, which are forceful and not easily strained. Once you have lifted the object, carry it close to your body about waist high. Tuck your pelvis forward so that the curve at the small of your back is less.

—When reaching to a top shelf or an object over head (e.g.) the bottle on the I.V. stand, stand close to your work. Place your feet in a way that gives you a broad base in the direction of the movement. This will permit free movement forward and backward as arms are raised and lowered.

—When moving large objects, the safety with which the work is done depends on the weight, size and compactness of objects and the efficiency with which your body is used. The use of mechanical devices such as wheels conserve energy and prevent injury.

II. Here is the correct body position for moving a patient toward the head of the bed:

Remember the following points:

1. Remove the pillows, sand bags and cover. Keep bed flat.
2. Always face the patient to be moved.
3. Place your foot to allow movement in the direction movement will occur.
4. Use your legs to give force. That is "push off" with your forward leg. And rock on to your back leg as you begin to lift.
5. Keep your back straight and
6. Tilt your pelvis.
7. When one person is assisting—she must stand on the side of strongest arm.
8. Be sure to explain to the patient what you want him to do and when you want it.
9. Tell him to dig his heels into the bed and pull on you, signal as you guide him.

III. Moving the back lying patient to the edge of the bed—do not try to lift the patient to edge of bed. Slide him over by reducing his friction of the bed by your arms.

One Person Technique:

1. Remove all the pillows and roll the bed flat.
2. Stand on the side you are moving the patient having one foot forward, with a wide base, knees bent with the forward knee against the side of bed.
3. Place one arm under the base of the neck and shoulders and the other under the upper back.
4. Pull the patient to you.
5. Move down, place one arm under the low back and the other under the thigh and pull toward you.
5. Move down, place one arm above the knee and one below the knee and pull towards you.

Two Persons Technique:

1. One person places one arm under neck and shoulder; other arm under upper back.
2. The other person—one arm under low back and the other arm under thigh. Adjust the legs to the correct position.
3. One person act like a leader and give command to start to pull toward you. Make sure both of you move the patient in one piece.

IV. A. In order to turn the patient toward you:

1. Remove pillows and bed cover.
2. Keep the bed flat.
3. Following good body mechanics move the patient to edge of bed in segments—head and trunk, bottom and legs as in point III.
4. Raise the side rail.
5. Go to the opposite side of the bed.
6. Place the near arm over the head of the patient cross the far leg and arm over the patient's body.
7. Roll the patient toward you to side lying position. Adjust according to comfort. Place pillows under head and shoulders, back and between legs.
8. Place foot board.
9. Place small pillow near chest area to rest the far arm.

B. If you are rolling a patient onto her side unaided follow these steps.

1. Raise the side rails on the side of the bed toward which you are rolling the patient.
2. Stand on opposite side of bed.
3. Move the patient toward the edge of bed as in point II.
4. Cross the patient's topmost legs and hand over other.
5. Now, using pelvis tilt and good leg action, roll the patient away from you and on to his side.

IV. Roll the patient from back to stomach.

1. Make sure all the pillows, sandbags and cover are removed. Keep the bed flat.
2. Make sure that the patient is on the other side of the bed. If not, the patient will end up forward knees against the side of the bed, grasp stomach.
3. Move the patient to the edge of bed opposite to the side she is turned.
4. The nurse should stand on the other side of the bed (to turn him toward her). Position the near arm of the patient above the head.
5. Cross the far leg over the near leg and the far arm across the chest.
6. Using a wide base, knees bent, with the forward knees against the side of the bed grasp the patient with one hand behind the scapula and the other over the buttocks.
7. Roll the patient as if you are rolling a leg. Be sure to move him all in one piece. Make sure that his hand is not left under his body.
8. If it is allowed, a small pillow under the abdomen gives comfort.
9. A helpless patient is moved by two nurses. In such cases one should assume leadership to signal for the movements.

V. Getting the patient out of bed to a chair:

1. Raise the head of the bed.
2. Following the body mechanics face the head of the bed.
3. Place one hand under the knees of the patient.
4. Place the other hand under the patient's shoulders.
5. Swing the patient's legs to end of bed as you simultaneously help him lift the shoulders off the bed.
6. With the patient sitting straight on the edge of the bed block patient's knees with your knees. This will prevent the bending of the patient's knees.
7. Place your arms through axillary area in order to control the movement of the trunk when moving toward the chair.
8. Bend at your knees and hips give counter pressure against your patient's knees, assist him to a standing position. Keep the patient in that position for one minute, observe the patient for dizziness, fainting, loss of strength and his ability to follow instructions. Watch for vital signs.
9. Pivot the patient into the bedside chair. If your patient's one side of the body is stronger than the other, make sure you are moving him toward that side. He will be better able to assist with the movement towards his stronger side. To achieve this keep the chair on that strong side.

VI. To put the patient back to bed from the chair:

1. Place a foot stool near the bed. Maintain a wide base at your feet. Place one foot forward. Bend your hips and knees. Place your hands around the patient's axillae. Swing the patient so that he can place his strong hand on the bed. Stabilize the stool by putting your foot on the bottom bar of the stool. Have the patient place his strong foot on the foot stool.
2. Assist him to the edge of bed keeping more to the head end.
3. Once sitting on the edge of the bed ask him to scoop back by moving one hip backwards at a time. You can help by pushing on the knee and lifting the thigh as the hip goes backwards.
4. Swing his legs on to the bed.
5. Assist him to adjust to the position required.

VII. Move the patient from bed to stretcher:

A. **Draw sheet technique:**

1. Move all pillows, sand bags, and cover. Keep the bed flat.
2. The move is best made with 3 or 4 nurses; especially when the patient cannot control his head (i.e.) after a stroke, unconsciousness, patient coming from O.R.
3. Place the stretcher close to the bed. 2-3 nurses stand across the stretcher one on the other side of the bed. All the nurses should spread their feet apart with one in front of the other; hips and knees bent.
4. The movement of the patient is done by extending the nurses' knees and shifting their

weight from one foot to the other.

5. All persons must move on a given signal by one of the nurses. The patient should be lifted only slightly to reduce friction then slide across the bed, on signal to the stretcher. The reverse is done to move the patient from stretcher to bed.

B. Lifting technique:

1. Remove all pillows, sand bags, and cover. Keep bed flat.
2. Keep the stretcher at the foot side of the bed away from its parallel line.
3. Three nurses stand at the side of the bed where the stretcher is kept—preferably tall nurse at the head side of the patient.
4. The first nurse slips her arm under the patient's neck and grasps the patient's far shoulder. She slips her other hand under the small of the patient's back. The second nurse slips both of her arms under the patient's body and above the buttocks and one below. The third nurse slips both arms under the patient's legs, one above and the other below the knees.
5. On a given signal by one of the nurses, the nurses slide the patient to the edge of the bed, lifting the patient at the same time, then turn the patient to face them and then carry the patient on their chests. The sliding is very important—because it greatly simplifies the lifting. The sliding and lifting should be done as a continuous action.
6. Placing the patient on the stretcher is done by slowly bending the knees while slowly moving the patient away from your chest.
7. The reverse is done to put the patient to bed from the stretcher.

A CORRECTION

In the article entitled 'School Improvement Plan' published in the May 1982 issue of the Journal, the first sentence on top of column 3 on p. 123 should be read as follows:

"These practices violate Convention 149, Recommendation 159 para XII No. 60 (1) and (2) concerning Employment and Conditions of Work and Life of Nursing Personnel, adopted by the ILO, June 1977, which the Government of India is committed to adopt in a phased manner: (1) practical work of students should be organized and carried out by reference to their training needs; it should in no case be used as a means of meeting normal staffing requirements."

The error of missing a phrase of the expression is regretted.

Editor, NJI.