

Variations in Diaphragmatic Breathing

RICHARD L. DONTIGNY, B.S.

The development of breath control is important to the patient with respiratory insufficiencies, and the present physical therapy approach to this problem consists primarily of instruction in diaphragmatic breathing. Several variations of diaphragmatic breathing are presented here as though one were instructing a patient. These variations should help increase the efficiency of the breathing mechanism. As proficiency increases through the implementation of the different varieties of breathing exercises, diaphragmatic breathing may become easier.

DIAPHRAGMATIC BREATHING

Lie supine with the hips and knees flexed and the feet flat on the table. Breathe in through the nose and imagine you are trying to fill your stomach, not your chest, with air. Exhale through pursed lips by drawing in the stomach and attempt to empty your lungs completely. Concentrate on breathing slowly and rhythmically with the emphasis on exhalation. Breathe ten times and then rest. Repeat the exercise ten times during the day.

An object placed on the chest and another on the abdomen will emphasize the movement that takes place during respiration. When you are breathing properly, the object on your abdomen will rise and fall while the object on your chest will remain relatively still.

Rhythmic Breathing

When diaphragmatic breathing can be done easily and without distress, try counting during each inhalation and exhalation so that each breath will be the same. Palpate your pulse and inhale to four counts and then exhale to four counts. As you gain more control, slow the rhythm to five or six counts until you find a pace that is comfortable for you. If you become short of breath, increase the pace to three counts or even to two counts.

In order to emphasize exhalation, gradually decrease the counts on inhalation and increase the counts on exhalation until you are exhaling twice as long as you are inhaling.

More variety can be added by holding the breath after inhalation. Begin gradually by inhaling, holding, and exhaling to the same number of counts, as long as it can be done without discomfort. Gradually increase the holding period until it is twice as long as the exhalation period. This may take a few months. Holding the breath after complete exhalation may stimulate coughing.

Alternate Breathing

Electromyographic readings taken during diaphragmatic breathing have demonstrated an increase in the activity of the abdominal muscles, especially in the obliques. In order to facilitate the oblique muscle reinforcement during diaphragmatic breathing, attempt to breathe using only one side of the thorax. When breathing with the right side of the thorax, lie supine with the hips and knees flexed, place the right hand behind the head and hold the left arm, with the elbow flexed, snugly against the left side of the rib cage. On exhalation, raise the right shoulder forward slightly to stimulate the use of the right external and the left internal oblique muscles.

When breathing with the left side of the thorax, place the left hand behind the head and hold the right arm snugly against the right side of the rib cage. Raise the left shoulder forward slightly on exhalation to stimulate the use of the left external and the right internal oblique muscles.

Work up to ten respirations on each side, gradually adding the variations previously described. All variations may be practiced in the prone, sitting, and standing positions also.

Mr. DonTigny is the Chief, Physical Therapy Department, Northern Montana Hospital, Box 1231, Havre, MT 59501.

514

PHYSICAL THERAPY

MAY 1973