Postural Drainage

Postural drainage includes several methods used to help clear the mucous out of the lungs. Many illnesses such as cystic fibrosis (CF), pneumonia, or the common cold can cause the secretions (*mucus*) in the lungs to become thick and/ or sticky. This can block the airways in the lungs and cause serious problems. You can help keep your child's lungs working well and avoid problems caused by mucus buildup by regularly tapping on the chest (*postural drainage and chest percussion*). This technique can help you and your child clear mucus from your child's lungs.

Your child may require postural drainage several times a day or only once or twice a week, depending on the seriousness of the disease and the methods used. The process takes about 20 to 30 minutes. Some positions may take only 1 to 2 minutes, while others may take 10 minutes. Morning is a good time for doing postural drainage to clear mucus that has built up during the night. Postural drainage near bedtime may decrease nighttime coughing. Do not do it for at least an hour following a meal because it can increase the risk of vomiting or reflux. Reflux is the bubbling of the stomach contents back up the tube through which food passes from the mouth to the stomach (*esophagus*).

CHEST PERCUSSION

One method used to perform postural drainage includes positioning and chest percussion. The various positions used in postural drainage help drain mucus from different sections of the lungs. Your caregiver will recommend which positions you should use and how often the process should be done.

Chest Percussion Procedure

- Gather your equipment, such as tissues, towels or a spitting basin. With young children, pillows, a bed or a chair may also be helpful.
- Your caregiver can recommend certain positions to use to target, or work on, involved areas of the lungs.
- Using these positions suggested, tap your child's back or chest with a cupped hand. Tap quickly at regular intervals. This loosens mucus so it can drain. When you tap the chest with the cup of your hand, you should hear a hollow sound. If you hear slapping sounds, your hand is not cupped enough and will cause more discomfort. Tap over the chest, but not over the kidneys (lower back), backbone or the breasts of females. It may be more comfortable for your child if you cover the area to be tapped with thin clothing or a cloth. Do this for each position.
- How much force to use and how much time to spend tapping depends on the child. Younger and smaller children need less force and time than older and larger children. Do not tap the child hard enough to cause discomfort. If mucus is not coming up, however, you may need to use more force or there may simply not be much mucus on some days. The amount of mucus produced will vary with water intake, the amount of humidity in the air and the general health of the child.
- After tapping, have your child cough. First, have your child breathe in deeply and then breathe out forcefully. When breathing out, have your child say “huff.” Have your child do this two to three times before a cough. Your caregiver can show you and your child how to “huff.”

HIGH FREQUENCY CHEST COMPRESSION (VEST)

High frequency chest compression uses an inflatable vest, similar to a life jacket, connected by hoses to an air generator. The generator delivers air to the vest, which helps to vibrate the chest and all areas of the lungs. This movement helps to clear mucus from the airway, which makes it easier to cough up secretions. Your caregiver will help you use this device and tell you how often to use it.

FLUTTER

The flutter is small hand-held device that creates pressure in the lungs to loosen lung secretions. This makes it easier to cough up secretions. The flutter has a mouthpiece, a ball, and a cone that holds the ball. When the patient exhales through the flutter, the ball moves, causing vibrations in the lungs and loosening mucus. Your

caregiver will help you use this device and tell you how often to use it.

For best results, use the prescribed method of postural drainage and chest percussion regularly. A clear airway helps prevent infections, makes breathing easier, may prolong life and improves quality of life. These techniques are only one part of a broad treatment plan. Your child still needs regular medical care and monitoring of problems along with these techniques. It is important to visit your caregiver as suggested to assess your child's condition and make necessary changes in treatment.

HOME CARE INSTRUCTIONS

- Your caregiver may have prescribed an antibiotic if he or she feels your child's cough is caused by a germ (*bacterial*) infection. Make sure your child takes the medication as directed, and finishes ALL the medication.
- Your caregiver may also prescribe a medicine (*expectorant*) to loosen the mucus to be coughed up.
- A cold steam vaporizer or humidifier in your child's room or elsewhere in the home may help loosen secretions.
- Cough is most often worse at night. Sleeping in a semi-upright position in a recliner or using a couple of pillows will help with this.
- Make sure your child gets the needed rest.

SEEK IMMEDIATE MEDICAL CARE IF:

- Your child develops more pus-like sputum, has an uncontrolled fever or keeps getting sicker.
- Your child cannot stop coughing and is losing sleep.
- Your child begins coughing up blood.
- Your child develops pain that is getting worse or cannot be controlled with medications.
- Your child develops an oral temperature above 102º F (38.9ºC), after not having a fever for one or more days or as suggested by your caregiver.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your child’s condition.
- Will get help right away if your child is not doing well or gets worse.

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