

## Chest Physical Therapy (CPT)

Chest physical therapy (CPT) is a treatment that helps remove mucus from your lungs. Some people only need it for a short time after a lung illness. If you have chronic lung disease you need to have these treatments daily. CPT consists of two therapies:

- Postural drainage or positioning
- Percussion, clapping, or cupping

### Postural Drainage

Postural drainage removes mucus from certain parts of your lungs using gravity. By placing yourself or your child in different positions, mucus drains to the bigger airways where it can be coughed out.

### When to Schedule Treatment

CPT works best in the morning. This allows mucus to be removed that has built up during the night. Sometimes a treatment can be done before bed to decrease coughing while sleeping. Make sure you do CPT before meals or wait at least 1-2 hours after eating before starting. This helps prevent nausea and vomiting.

### Positioning

Before beginning the treatment, wash your hands with soap and warm water, or use anti-bacterial hand gel, to reduce the risk of infection.

The pictures on pages 3 – 6 show the positions that drain mucus from certain parts of your lungs. If you are draining the lower lung areas, tilt your chest area 10-20 degrees below your hips. This is done by:

- Propping firm pillows or cushions under your hips, on the bed, floor or couch
- Using a positional lounge chair

**Note: If your child is under the age of 5 or has cystic fibrosis, you will keep the chest horizontal, not tilting your child’s head down, while doing percussion.**

Your child should remain in each position for at least 3 minutes. If you find that your child coughs up a lot of mucus when in certain positions, spend more time draining these areas.

### Deep Breathing and Coughing

Deep breaths should be taken once in a while during the treatment. This helps expand your lungs and strengthens your cough. A cough should be done after each position of percussion.

### Percussion

Perform CPT by clapping with a cupped hand or rubber palm cup over the part of the lung being percussed. The cup forces a cushion of air against the chest wall, which vibrates the lungs and loosens secretions. Hold your hand as shown below to form a cup for percussion.



Percussion should be done on the round areas shown on each picture. It should always be done over the rib cage. Never percuss over the spine, breasts, sternum (breast bone), IV, chest tube or fresh surgical sites on the chest. CPT is done over a thin article of clothing or a towel, not on bare skin.

Percussion should last 3-5 minutes per area being drained. Areas that have a lot of mucus may need more time.

If cupping is hard to do, or your hands are too large for the chest wall area, soft plastic hand-held percussor cups may be used. A mechanical percussor may be used instead of hand or cup CPT for people with brittle bones or surgical sites.

### **Vibration**

Vibration is a technique that also helps the movement of mucus. You will need someone to help you. Have your helper place their flattened hand over the area that was percussed. When you take a breath in and exhale, the helper should quickly but gently shake your chest while you exhale. Repeat this process three times after percussing each position. Follow all vibration therapies with a cough.

## Chest Physical Therapy Positions for Infants and Children

Below are the drainage positions for CPT. The white ovals show you where to percuss.

### Upper Lobes

Lean forward 30°. Percuss between the collar bone and the shoulder blade on each side of your child's chest.



Lean back 30°. Percuss between the collar bone and the nipple on each side of your child's chest.

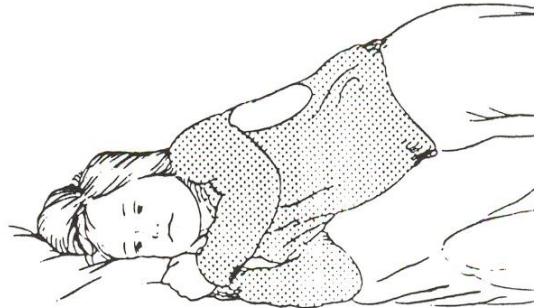


### Lower Lobes

The body should be positioned with your child's head down 10-20° and lying on the right side. Percuss on the left side below the underarm. **Note: If your child is under the age of 5 or has cystic fibrosis, you will keep the chest horizontal, not tilting your child's head down, while doing percussion.**



Horizontal

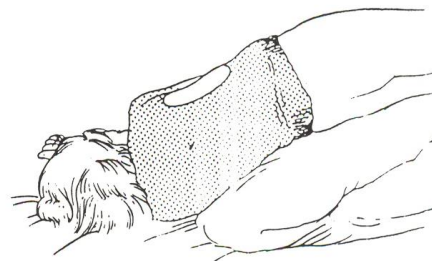


Head down 10-20°

The body should be positioned with your child's head down 10-20° and lying on the left side. Percuss on the right side below the underarm. **Note: If your child is under the age of 5 or has cystic fibrosis, you will keep the chest horizontal, not tilting your child's head down, while doing percussion.**



Horizontal

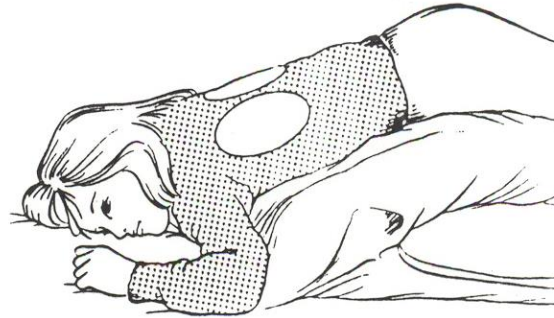


Head down 10-20°

The body should be positioned head down 10-20° and lying on the abdomen. Percuss between the lower edges of the rib cage and behind the underarm on each side of the spinal cord. **Note: If your child is under the age of 5 or has cystic fibrosis, you will keep the chest horizontal, not tilting your child's head down, while doing percussion.**



Horizontal

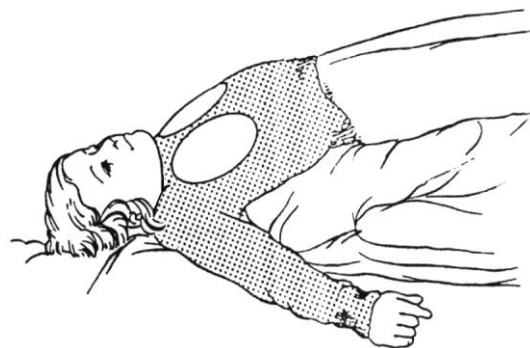


Head down 10-20°

The body should be positioned head down 10-20° and lying on the back. Percuss on the front of the chest in the nipple area and just below. **Note: If your child is under the age of 5 or has cystic fibrosis, you will keep the chest horizontal, not tilting your child's head down, while doing percussion.**



Horizontal

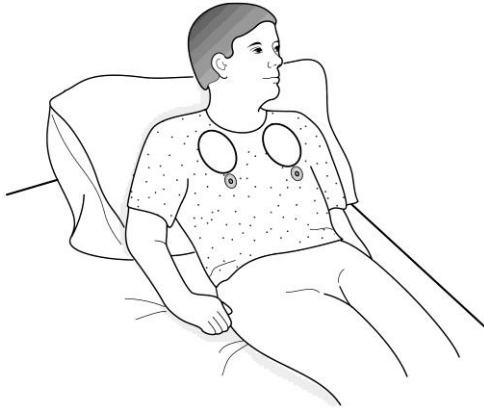


Head down 10-20°

## Chest Physical Therapy Positions for Adults

### Upper Lobes

While sitting lean back against a pillow.  
Percuss just below the collar bone above nipples.

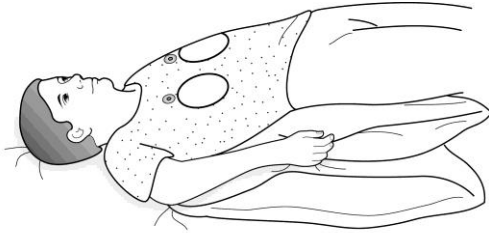


While sitting, lean forward against a pillow.  
Percuss between the collar bone and shoulder blade.

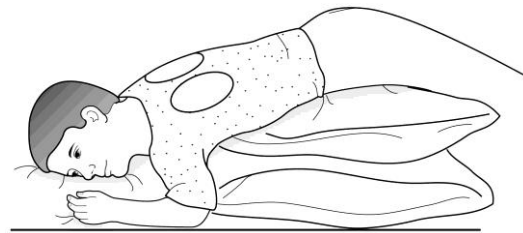


### Lower Lobes

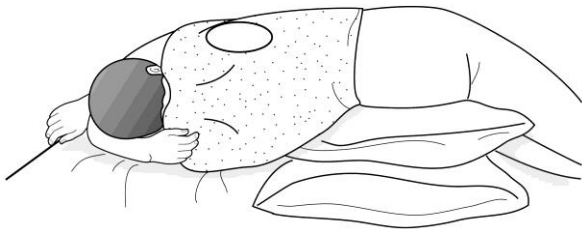
Lie on your back with head lower than hips.  
Percuss just below the nipple area.



Lie on your stomach with your head lower than your hips. Percuss lower edges of rib cage on each side of the spine.



Lie on your left side with your head lower than hips. Percuss on right side below underarm.



Lie on your right side with your head lower than hips. Percuss on left side below underarm.

