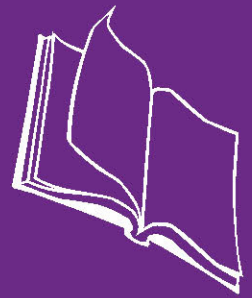


**The  
Emily  
Center**



# **How to Do Chest Physical Therapy (CPT)**

**Children, Adolescents, and Adults**



**PHOENIX  
CHILDREN'S**  
*Hospital*



Name of Child: \_\_\_\_\_ Date: \_\_\_\_\_

# **How to Do Chest Physical Therapy (CPT)**

## **Children, Adolescents, and Adults**

Your child needs a treatment called Chest Physical Therapy or CPT. CPT is also called Percussion and Postural Drainage (P & PD). Read this booklet to learn what CPT is and how to use it to help your child.

### **What is CPT?**

Chest Physical Therapy (CPT) is something you can do to help your child breathe better. Sometimes there is too much mucus, or it is too thick. It blocks the air from moving in and out of your child's lungs. Mucus makes it hard for your child to breathe. Mucus that sits too long in the lungs can also grow germs that can make your child sick. CPT helps to loosen your child's mucus, so your child can cough it up.

Think about how you would take Jell-O out of a mold. You tilt the mold over, then shake it and tap it to loosen the Jell-O. Mucus is like that Jell-O, and CPT helps to get it out.

# Words to Learn

**Airways** Air moves through these and into your lungs. The airways of the nose and throat lead to the big airways in the chest. The big airways branch off into smaller airways in the lungs. The big airways are like a trunk of a tree, and the small airways, like the branches.

**Chest Physical Therapy (CPT)** is something you can do to loosen your child's mucus. The three parts to CPT are postural drainage, percussion and deep breathing and coughing.

**Percussion** is clapping the chest. Percuss means to tap sharply. A drum is a percussion instrument. Percussion in CPT can be done with either a cupped hand or an electric percussor. The clapping shakes the inside of the chest and loosens mucus, so it is easier to cough out.



**cupped hand**

**Postural Drainage** moves the mucus by changing the child's position. Mucus, like water, moves from high places to low places. Tilting the child helps move the mucus from the small airways at the bottom of the lungs to the large airways in the middle. The most mucus moves into the large airways when you do percussion and postural drainage together.

**Deep breathing and coughing** helps to move the loosened mucus.

**Lobe** is a section of the lung. The left lung has two lobes, and the right lung has three lobes.

# Before Doing CPT

- It is best to do CPT before meals or at least one to two hours after eating. This will make it less likely that the child will feel sick to the stomach or throw up.
- The best times for CPT are early morning and at bed time. Early morning CPT helps remove the mucus that built up over night. Bed time CPT takes out the mucus of the day, and helps the child cough less at night. Your doctor may want you to do CPT more often.
- Your doctor may prescribe medicine to open the airways. This may come as an SVN (small volume nebulizer) or an MDI (metered dose inhaler). This medicine should be taken before CPT. The medicine, positioning and percussion all work together to clear the mucus from the lungs.
- The person doing the CPT should take off all rings and jewelry on the hands or wrists.
- If the child's clothing is tight or has thick seams, remove it.
- If the child is wearing clothes with buttons, remove it.
- Have the child wear a t-shirt or put a soft cloth over the spot that will be percussed.

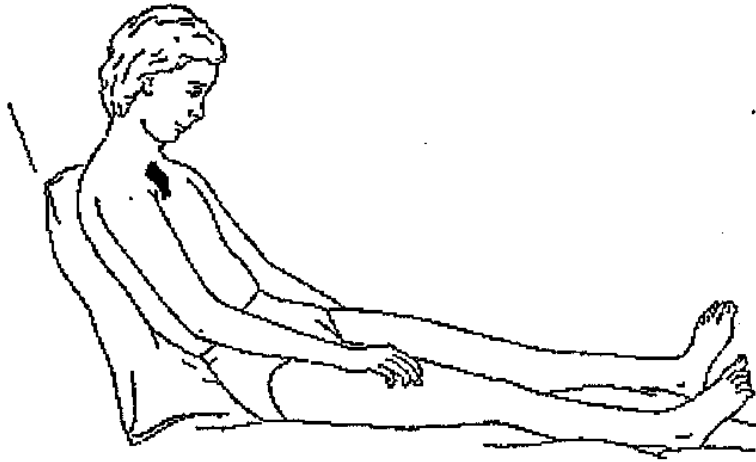
## You Need:

- A place to do CPT. You will need a bed, pillows, a couch, floor or a special table (slant board).
- Your hand or a percussor.
- A clock or a timer, to know how long to percuss.

## What to do:

- Always percuss over the ribs. Never percuss below the ribs or on the stomach. The lungs are in the chest, protected by the ribs. Never percuss on the backbone, breast bone, nipples or on any IV tubes or feeding tubes.
- Do CPT in each spot for  
☐ 2 minutes   ☐ 3 minutes or ☐ \_\_\_\_ minutes.  
(Health Care Provider: check one)  
Your doctor will tell you how long to percuss.  
One session of CPT should take 20 to 40 minutes.
- Usually, CPT is done in all the positions and percussion in all the spots.  
Your doctor may have you do more in some areas, where the chest x-ray shows more mucus.
- If your child's mucus has bright red blood in it, stop the CPT and call your doctor.

# Positions



## ☐ Top Upper Lobes

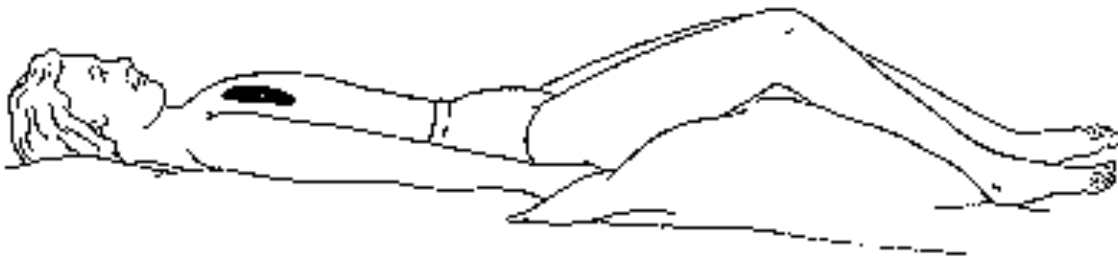
- Sit the child up. Tilt the child half way between sitting up and laying flat.
- Percuss between the nipple and collarbone on the **left** side of the chest for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.
- Percuss between the nipple and collarbone on the **right** side of the chest for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.



## ☐ Back Upper Lobes

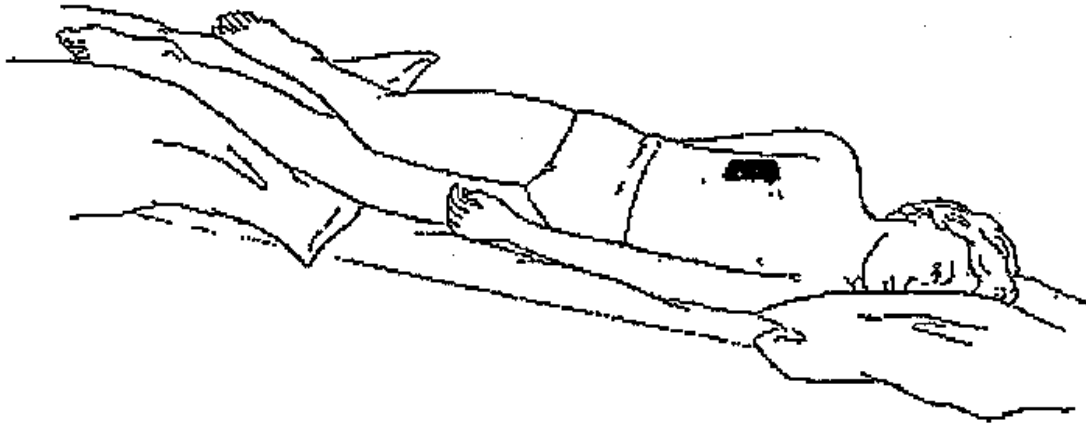
- Sit the child up. Tilt the child half way between sitting up and laying flat.
- Percuss over the shoulder blade on the left side of the back for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.
- Percuss over the shoulder blade on the right side of the back for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.





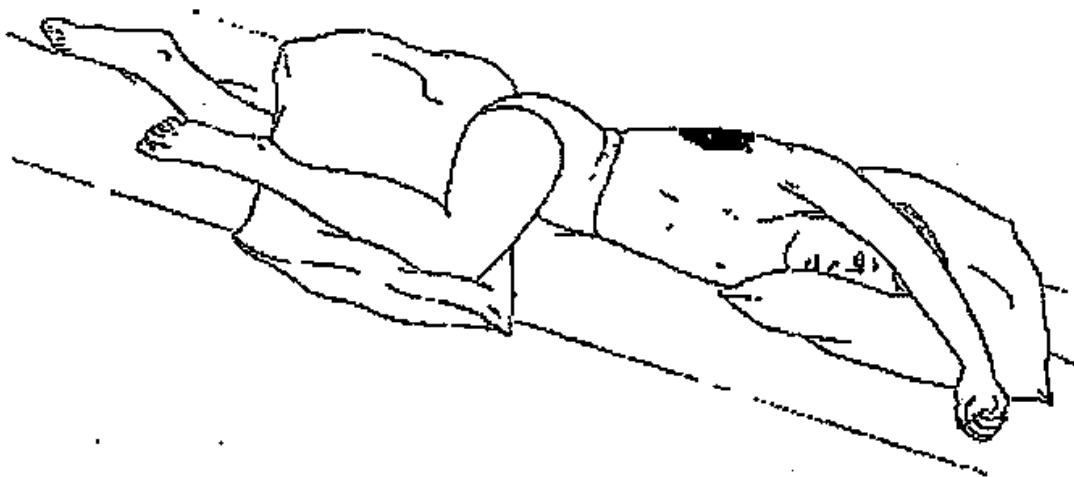
## ☐ Front Upper Lobes

- Lie child on his or her back.
- Percuss between the nipple and the collarbone on the **left** side for  
☐ 2 minutes p 3 minutes  
or ☐ \_\_\_\_ minutes.
- Percuss between the nipple and the collarbone on the **right** side for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.



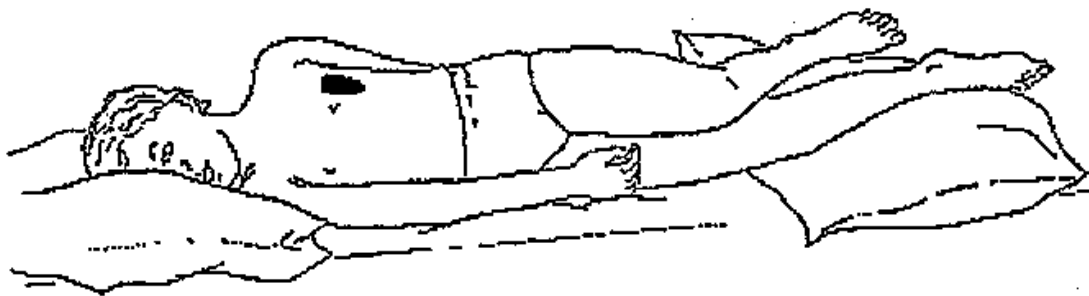
### ☐ Front Right Middle Lobe

- Lie child down on his or her left side, feet higher than head.
- Percuss below the **right** arm, but above the bottom edge of the ribs, for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.



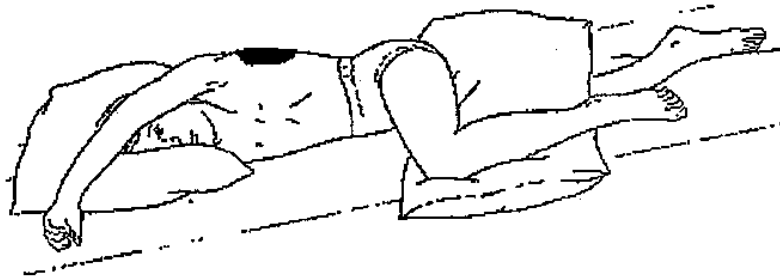
### ☐ Side of Right Lung

- Lie child on his or her back, feet higher than head.
- Turn the child to his or her left, half way between back and side.
- Percuss between the child's **right** nipple and underarm for
  - ☐ 2 minutes ☐ 3 minutes
  - or ☐ \_\_\_\_ minutes.



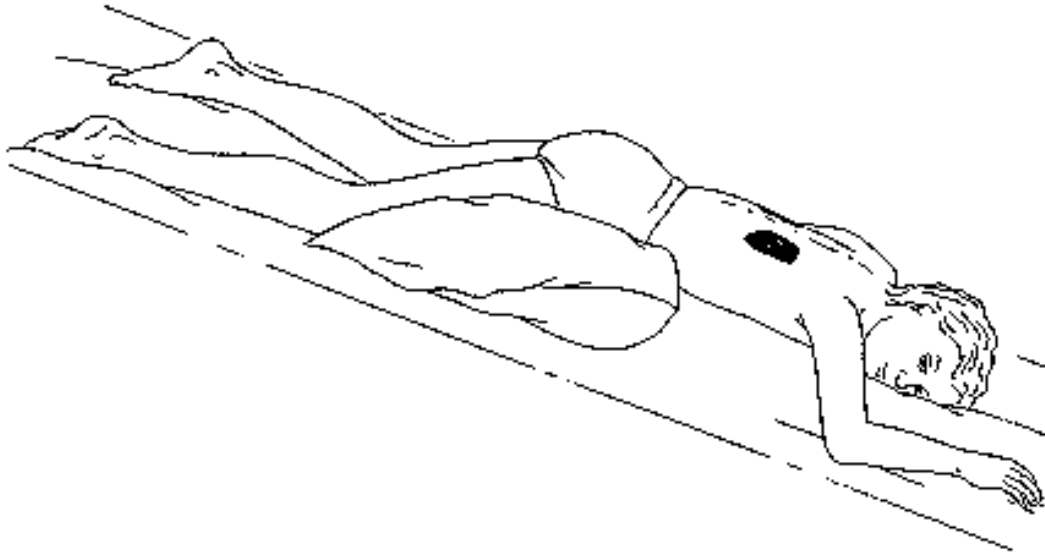
## ☐ Front Left Lower Lobe

- Lie child on his or her back, feet higher than head.
- Turn the child to his or her right, half way between back and side.
- Percuss between the child's left nipple and underarm for
  - ☐ 2 minutes    ☐ 3 minutes
  - or ☐ \_\_\_\_ minutes.



### ☐ Side of Left Lung

- Lie child down on his or her right side, feet higher than head.
- Percuss below the left arm but above the bottom edge of the ribs for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.



## ☐ Back Lower Lobes

- Lie child on his or her stomach, feet higher than head.
- Percuss over the middle of the **right** ribs, above the bottom edge of the ribs for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.
- Percuss over the middle of the **left** ribs above the bottom edge of the ribs for  
☐ 2 minutes ☐ 3 minutes  
or ☐ \_\_\_\_ minutes.

## **During the treatment**

- Your child may read while getting CPT.
- CPT time is also good for getting closer to your child. Together, you may talk, sing or play word games.

## **After the treatment:**

- Your child may cough more during or after CPT. Coughing helps your child get rid of the loosened mucus.
- Your child may cough up to one or two hours after CPT. Even if no mucus comes up, the CPT is working.
- After swallowing a lot of mucus, your child may feel sick to the stomach or throw up. As soon as your child is old enough to learn to spit, teach him or her how to spit the mucus into a tissue.
- If your child does not stop throwing up, call your doctor.

# How Your Child Reacts to CPT

Teach your child why you do CPT. Use your CPT time to talk with your child. Talk about things that are important to him or her, like school or friends. This will help your child look forward to this time alone with you. This will be better, over time, than if your child does CPT because of bribes or threats.

Your child may ask questions about CPT or his or her illness. Answer questions honestly, in simple ways your child can understand. If your child asks a tough question, ask your child why this topic came up. Sometimes the child only has a simple question that needs answering.

☐ If CPT will always be a part of your child's daily routine:

It is important to have a routine, because many children rebel when they reach their teenage years. They may fight having CPT. This is normal. It is important to be ready for this so you can explain why CPT is important.

If the problem continues, talk with your doctor or respiratory therapist about possible alternatives to CPT.

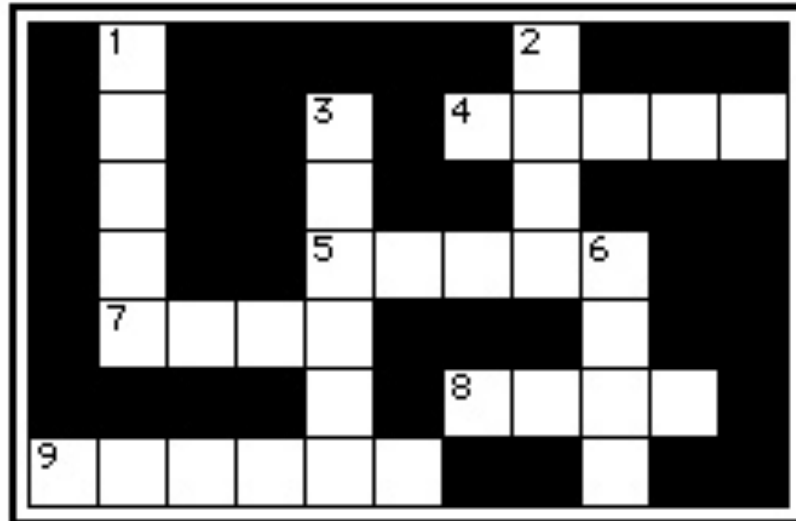
## Now that you've read this:

☐ Show your nurse, respiratory therapist, or doctor how you do CPT on your child. (Check when done.)

☐ Do the CPT crossword puzzle. (Check when done.)



# CPT Crossword Puzzle



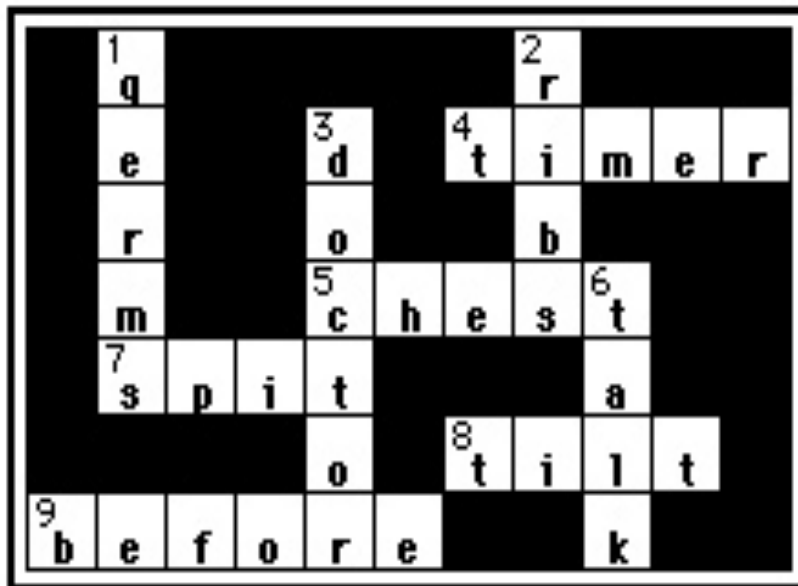
## ACROSS

- 4 When doing CPT, use a clock or \_\_\_\_\_.
- 5 CPT stands for \_\_\_\_\_ Physical Therapy
- 7 If old enough, give your child a tissue to \_\_\_\_\_ in during CPT.
- 8 Another word for postural drainage.
- 9 Give medicine \_\_\_\_\_ doing CPT.

## DOWN

- 1 Mucus that sits in the lungs can grow these.
- 2 Percuss over your child's \_\_\_\_\_.
- 3 Call this person if you have any question
- 6 \_\_\_\_\_ with your child during CPT.

## Answer to the CPT Crossword Puzzle



If you have a question about CPT or this puzzle, ask your respiratory therapist, nurse or doctor.



If you have any questions or concerns,  
☐ call your child's doctor or ☐ call \_\_\_\_\_

If you want to know more about child health and illness,  
visit our library at The Emily Center at Phoenix Children's Hospital  
1919 East Thomas Road  
Phoenix, AZ 85016  
602-546-1400  
866-933-6459  
[www.phoenixchildrens.com](http://www.phoenixchildrens.com)

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**This booklet was written with the help of many  
respiratory therapists, doctors and nurses at Phoenix Children's Hospital.**

#55b • Written by Ron Evans, RCP  
Puzzle written by Fran London, MS, RN • Illustrated by Dennis Swain