

**Information for Patients**

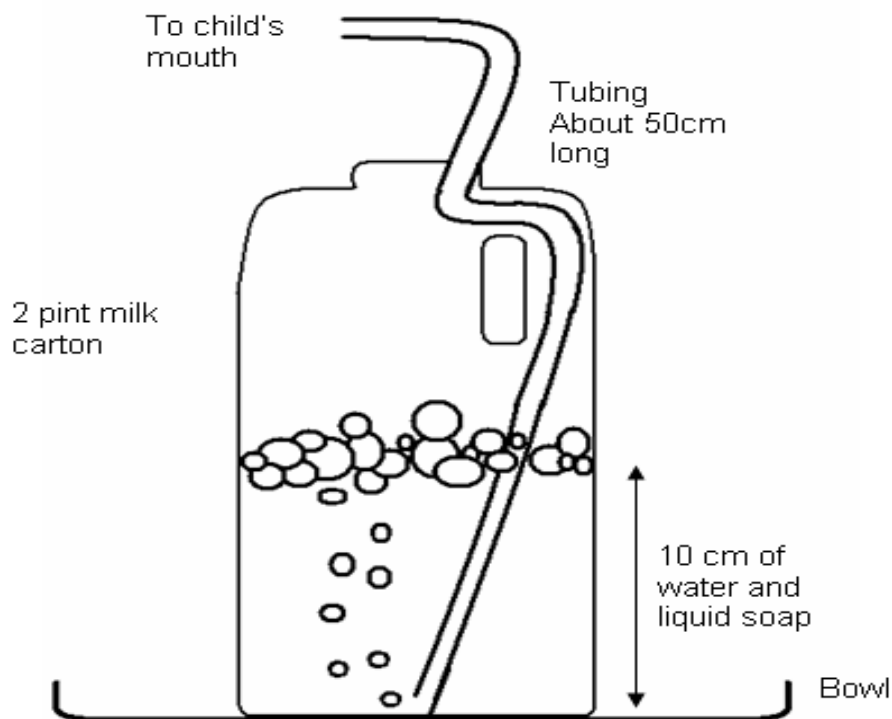
**Bubble PEP  
(Bubble Positive Expiratory  
Pressure)**

**Physiotherapy Service**

## What is Bubble PEP?

Bubble PEP is a treatment for children who need help to clear secretions (sputum/phlegm) from their lungs. It is fun way of doing their "chest physiotherapy" / airway clearance and your physiotherapist can teach it to your child once they know the difference between blow and suck, usually from the age of 2 1/2 -3 years of age.

## What does Bubble PEP consist of?



It is made very simply with tubing a plastic bottle and some water with liquid soap or detergent in it. You will also need a tray or bowl to catch the bubbles which are formed, there can be lots and it can get very messy, but it's fun!

## **How does Bubble PEP work?**

The end of the tube is under the water which creates positive pressure as your child blows against it. This pressure holds open your child's airways and allows air to move behind any secretions, these two things improve airflow which helps move secretions up their airways, to a point where they can huff or cough them out. The vibrations caused by making the bubbles also helps thin and loosen the secretions, making them easier to clear.

## **How to do Bubble PEP**

Your physiotherapist will teach you how to do Bubble PEP and will advise you how often your child needs to do it. This leaflet is to remind you what they said and any specific information relating to your child.

## **Settling Bubble PEP up**

You will need:

- A cleaned plastic milk bottle with a handle, filled to about 10cm with tap water and 3-5 drops of liquid detergent or bubble bath.
- Tubing, approximately 7mm diameter and between 30-50 cm long, which you thread down the arm of the bottle so that the end rests on the bottom of it.
- A tray or bowl into which you put the bottle, and a surface where your child can sit or stand comfortably without being hunched over.

## **How to do a treatment with Bubble PEP**

1. Your child needs to breathe in, through their nose if possible, and breathe out through the tubing. Repeat this 6-10 times. Each breath should be slightly bigger than their normal breath size, and both the "in and out breaths" should be done slowly and not rushed. The bubbles will rise to the top of the bottle and pour out into the tray.
2. After the 6-10 blows they should remove the tube and have a rest for a few seconds.

3. They should then do 1-2 huffs (a fast breath out with an open mouth, as if they were steaming up a mirror), or 1 huff and cough. If they have moved any secretions into their mouth, encourage them to spit these out. They should then rest again for a few seconds. 1

You can repeat steps 1, 2 and 3 until their chest sounds clear when they huff, then listen to their huff, for 2 further cycles, if it still remains clear your child can then stop for that session.

Or your physiotherapist may say to do each cycle of 1, 2 and 3 a set number of times at each session of Bubble PEP.

If your child becomes unwell, your physiotherapist will suggest doing more cycles at each treatment session, or do more sessions in a day. Discuss it with them.

### **How to clean your Bubble PEP**

Your physiotherapist will advise you about cleaning and replacing your Bubble PEP, and the advice may change, so do discuss it with them at clinic visits. You should always empty and clean the bottle and tubing in hot soapy water after each use and leave to air dry. Hang the tubing up by the middle so any water can come out. The bottle and tubing may be cold water sterilised with an appropriate solution at least weekly or more frequently. Your physiotherapist may suggest changing the tubing and bottle weekly if you do not sterilise it.

### **Things to look out for**

If you notice your child is coughing more with their Bubble PEP you should inform your CF team as they may need to see your child, or suggest starting some other treatment.

The following are exceedingly rare events, however you should stop your child doing Bubble PEP if they suddenly become short of breath, experience any pain, or you notice any significant change to the colour of their sputum. You must let your CF team know if any of these things happen.

Your child's name: \_\_\_\_\_

Your physiotherapist's name: \_\_\_\_\_

Date this leaflet was given to you: \_\_\_\_\_

Breaths your child should do in a row: \_\_\_\_\_ breaths

Seconds rest before huffing: \_\_\_\_\_ seconds

Followed by \_\_\_\_\_ huffs, and \_\_\_\_\_ coughs

Cycles of breaths: \_\_\_\_\_ cycles

Number of sessions a day: \_\_\_\_\_ times

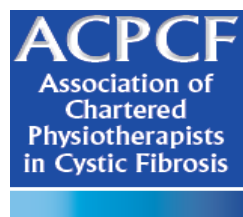
The tubing should be changed every \_\_\_\_\_ week(s)

**Any further advice:** \_\_\_\_\_

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Leaflet 1 form the Airway Clearance Techniques Series