

FLUTTER® Technique

1. You may want to have a glass of water and a box of tissue within close reach. Now, think about what you are doing, how you are going to breathe, and the goals of the therapy. Visualize the airways vibrating and the mucus being loosened and propelled along with your exhaled air to progressively larger airways so you can cough it out.

4. The angle at which you hold the FLUTTER® is critical. Hold it with the stem horizontal with the floor (see Figure 5). This places the cone at a slight tilt and insures that the ball not only bounces (flutters), but also rolls during your exhalation. Now experiment by tilting the FLUTTER® upward and downward (see Figure 6). You might get a greater fluttering sensation in your chest with the stem in a tilt position than you do with the stem in line with the floor. For best results, use the angle that gives you the strongest fluttering sensation. The fluttering may not occur immediately, so don't become discouraged. Several sessions may be required to learn how to "tune" the FLUTTER® for your specific needs.



Figure 5



Figure 6

Stage 2 Mucus Elimination

To accomplish mucus elimination, perform 1 or 2 additional breaths through the FLUTTER®. This time breathe in slowly and as fully as comfortably possible. Really fill your lungs with air. Again hold your breath for 2 to 3 seconds and then exhale **forcefully** through the FLUTTER® as **completely** as you comfortably can. This forceful exhalation moves mucus up to a level in your lungs that triggers a cough.

If mucus is not easily coughed out following 1 or 2 elimination breaths, attempt a "huff" maneuver (like trying to "huff" a bread crumb out of your throat).

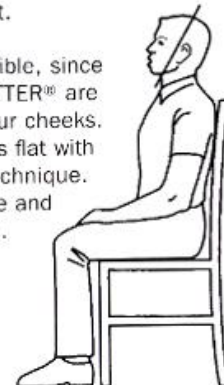
The standard series of 5 to 10 mucus loosening and mobilization breaths with cough suppression followed by 1 or 2 mucus elimination breaths with cough should result in successful airway clearance.

You may find that your therapy requirements for loosening, mobilizing and eliminating mucus may change, requiring modification of your routine to maximize therapeutic effectiveness.

Remember, the goal of airway clearance therapy is to comfortably and efficiently remove as much mucus as possible. The FLUTTER® will assist you in achieving this goal.

2. Begin by being relaxed. Sit with your back straight and head tilted slightly upward so your throat and windpipe are wide open (see Figure 4). This allows exhaled air to flow smoothly from your lungs out through the FLUTTER®. You may prefer an alternate position, with elbows placed on a table at a height that won't allow you to "slouch." Determine which position is best for you. If you must perform FLUTTER® therapy while in bed, sit as upright as possible in a position that will not restrict your smooth breathing effort.

3. Keep your cheeks as stiff as possible, since the vibrations produced by the FLUTTER® are wasted when they are used up in your cheeks. Look into a mirror or hold your cheeks flat with your other hand to help learn the technique. Eventually you will learn the technique and your cheeks will not vibrate as much.



Stage 1 Mucus Loosening and Mucus Mobilization

Slowly inhale (breathe in) beyond a normal breath, but do not fill your lungs completely. Place the FLUTTER® in your mouth with your lips closed around the stem. Position the FLUTTER® at the proper angle. After holding your breath 2 to 3 seconds, begin to breathe out through the FLUTTER® at a reasonably fast but not too forceful speed. Exhaling too fast and too forcefully at this point should be avoided. Concentrate on feeling the vibration in your airways, since the best results are obtained when there is maximum fluttering in your chest. Continue to exhale through the FLUTTER® to a level slightly further than you would exhale during normal breathing without the FLUTTER®. At this point, the urge to cough should be suppressed. Repeat the breathing technique described above for 5 to 10 breaths to loosen and mobilize as much mucus as possible from your airways, moving the mucus further up with each FLUTTER® exhalation.

During these loosening and mobilization breaths, it is important to inhale slowly, hold your breath 2 to 3 seconds, and as you exhale suppress your urge to cough. Now you are ready for Stage 2, mucus elimination with cough.

What is the recommended length and frequency of a FLUTTER® session?

Your healthcare professional will advise you on how often you should use the FLUTTER® and on the length of each session. Generally, morning and late afternoon or evening sessions are recommended. Sessions ranging from 5 to 15 minutes are common depending on your pulmonary condition and degree of severity. You can avoid becoming overly tired by adding a session instead of extending any one session to a point of discomfort. The inability to cough out additional mucus during therapy is often an indication that the session was successful and can be ended.

Important Tips

- When inhaling through the FLUTTER® either remove it from your mouth or, if you leave the FLUTTER® in your mouth, inhale through your nose.
- Holding your breath 2 to 3 seconds following every inhalation is very important. This allows the inhaled air to be distributed more evenly throughout the lungs. Patients with lung conditions do not fill their lungs evenly and holding one's breath partially makes up for that.
- Remember, "huff" maneuvers may be helpful.
- Beginning FLUTTER® users or those with particularly thick mucus may learn that multiple repetitions of Stage 1, mucus loosening and mucus mobilization, are necessary before performing Stage 2, mucus elimination. Several attempts may be necessary to help determine the appropriate number of breaths you need to perform in each stage.

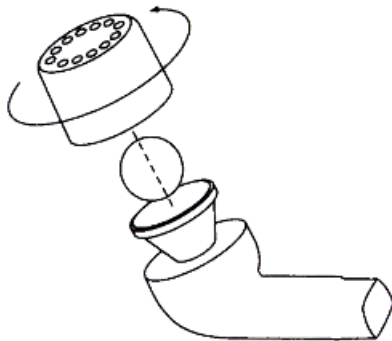


Figure 7

- It may be beneficial to have someone assist you when you first start using your FLUTTER®. You may forget some key points of proper use, and a second person can observe and encourage maximum effort on your part.

- A second person can also help determine when you achieve the strongest fluttering sensation by placing one hand on your back and the other hand on your chest and actually feeling the vibrations in your lungs as you exhale.

How do I clean the FLUTTER® ?

Cleaning your FLUTTER®, as with all respiratory therapy equipment used in the home, is extremely important.

Clean the FLUTTER® after each session to remove moisture and/or mucus from the internal components. Disassemble (see Figure 7) and rinse all components with tap water, wipe with a clean towel, reassemble, and store in a clean, dry location.

A more vigorous cleaning is recommended every two days. Again, disassemble your FLUTTER® and wash in a solution of mild soap or detergent. Do not use chlorine bleach or other chlorine-containing products (e.g., dishwashing detergent). Rinse all components with tap water. Wipe with a clean towel, reassemble, and store in a clean, dry location.

Quick Reference Guide

Stage 1 - Mucus Loosening and Mucus Mobilization

1. Gather supplies, relax, assume proper posture and position.
2. Slowly inhale beyond a normal breath, but do not fill lungs completely.
3. Hold breath for 2 to 3 seconds.
4. Place FLUTTER® in mouth, adjust tilt to feel maximum of vibrations within chest, keep cheeks stiff.
5. Exhale through FLUTTER® at a reasonably fast but not too forceful speed, using abdominal breathing.
6. Exhale beyond a normal breath, but do not empty lungs completely.
7. Attempt to suppress cough.
8. Repeat steps 1 through 7 for 5 to 10 breaths.

Begin Stage 2 - Mucus Elimination

9. Slowly inhale, filling lungs completely.
10. Hold breath for 2 to 3 seconds.
11. Place FLUTTER® in mouth, adjust tilt to feel maximum of vibrations within chest, keep cheeks stiff.
12. Exhale forcefully through FLUTTER® as completely as possible.
13. Repeat steps 9 through 12 for 1 to 2 breaths.
14. Initiate cough (or "huff" maneuver). Return to Stage 1 and repeat full sequence (Stages 1 and 2) until lungs are clear or therapy is over.
15. Additional sessions may be added if necessary.

Note: Clean FLUTTER® after each therapy session and store in clean, dry location.