

## Clinical Trial Overview

### High-Frequency Chest Compression: Chronic Lung Disease

This large randomized controlled crossover trial compared high frequency chest compression (HFCC) with professionally administered chest physiotherapy (CPT) in 29 cystic fibrosis (CF) patients hospitalized with acute pulmonary exacerbations. Sputum weight (wet and dry) was a proxy for efficacy. Results showed nearly three times greater sputum clearance in the HFCC group.

<b>Title</b>	Kluft J, Beker L, Castagnino M, Gaiser J, Chaney H, Fink R. A comparison of bronchial drainage treatments in cystic fibrosis. <i>Pediatr Pulmonol</i> 1996; 22: 271-274.			
<b>Design</b>	A prospective, randomized controlled, cross-over			
<b>Method</b>	<p>Twenty-nine hospitalized CF patients with acute pulmonary exacerbations received randomized treatment with HFCC and CPT</p> <ul style="list-style-type: none"> <li>• Two days with each therapy over a 4-day period</li> <li>• Three 30 minute therapy sessions/day</li> <li>• Expecterated secretions collected during each 30 minute therapy session</li> <li>• Twelve specimens per patient</li> <li>• Wet and dry weights determined gravimetrically</li> <li>• Means and standard deviations ( <math>X \pm SD</math>) based on 348 total sputum samples</li> </ul>			
<b>Results</b>	Weight	CPT/PD ( $X \pm SD$ )	HFCC ( $X \pm SD$ )	P VALUE
	Wet weight (g)	$2.86 \pm 4.0$	$6.76 \pm 9.7$	0.001
	Dry weight (g)	$0.26 \pm 0.45$	$0.74 \pm 2.4$	0.01
	<ul style="list-style-type: none"> <li>• HFCC is effective: Dry sputum weights were nearly threefold greater than those expecterated with professionally administered CPT</li> <li>• No adverse effects were observed</li> <li>• Patient tolerance and acceptance were high</li> </ul>			

03/08