

# Clinical Trial Overview

## High-Frequency Chest Compression: Pulmonary Function

This short-term evaluation of the effect of HFCC on pulmonary function compared with chest physiotherapy (CPT) or alternative therapies in 54 CF patients showed significant improvements in FEV<sub>1</sub> after an average 3 months of HFCC treatment.

<b>Title</b>	Anbar RD, Powell KN, Iannuzzi DM. Short-term effects of ThAIRapy® Vest on pulmonary functions of cystic fibrosis patients. <i>Am J Respir and Crit Care Med</i> 1998; 157 (Suppl 3): A130.															
<b>Design</b>	Retrospective Chart Review															
<b>Method</b>	<p>Pulmonary function data gathered by retrospective chart review was analyzed for 54 CF patients meeting inclusion criteria:</p> <ul style="list-style-type: none"> <li>• Age &gt; 5 years (average = 17 years)</li> <li>• Compliant HFCC therapy for at least 6 months</li> <li>• Average HFCC use = 19 minutes/day (<math>\pm</math>13 minutes)</li> </ul> <p>Prior use of CPT or not</p> <ul style="list-style-type: none"> <li>○ 61% used chest physiotherapy (CPT)</li> <li>○ 39% had NOT used CPT</li> </ul> <p>Post - HFCC PFT's were compared with best PFT scores obtained 0-6 months pre-HFCC</p>															
<b>Results</b>	<p>Best PFT results:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>12 – 18 mo pre - HFCC</td> <td>FEV<sub>1</sub> (<math>\pm</math>SD)</td> <td>78<math>\pm</math>26</td> <td>FVC (<math>\pm</math>SD)</td> <td>95<math>\pm</math>24</td> </tr> <tr> <td>0 – 6 mo pre - HFCC</td> <td>FEV<sub>1</sub> (<math>\pm</math>SD)</td> <td>76<math>\pm</math>26</td> <td>FVC (<math>\pm</math>SD)</td> <td>97<math>\pm</math>24</td> </tr> <tr> <td>0 – 6 mo post - HFCC</td> <td>FEV<sub>1</sub> (<math>\pm</math>SD)</td> <td>82<math>\pm</math>29</td> <td>FVC (<math>\pm</math>SD)</td> <td>101<math>\pm</math>26</td> </tr> </table> <ul style="list-style-type: none"> <li>• FEV<sub>1</sub> values improved an average of 8% overall</li> <li>• FEV<sub>1</sub> values improved an average of 7 % in patients using CPT prior to HFCC</li> <li>• FEV<sub>1</sub> values improved an average of 11% in patients using non-CPT therapies prior to HFCC</li> <li>• No adverse events were reported</li> </ul>	12 – 18 mo pre - HFCC	FEV <sub>1</sub> ( $\pm$ SD)	78 $\pm$ 26	FVC ( $\pm$ SD)	95 $\pm$ 24	0 – 6 mo pre - HFCC	FEV <sub>1</sub> ( $\pm$ SD)	76 $\pm$ 26	FVC ( $\pm$ SD)	97 $\pm$ 24	0 – 6 mo post - HFCC	FEV <sub>1</sub> ( $\pm$ SD)	82 $\pm$ 29	FVC ( $\pm$ SD)	101 $\pm$ 26
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