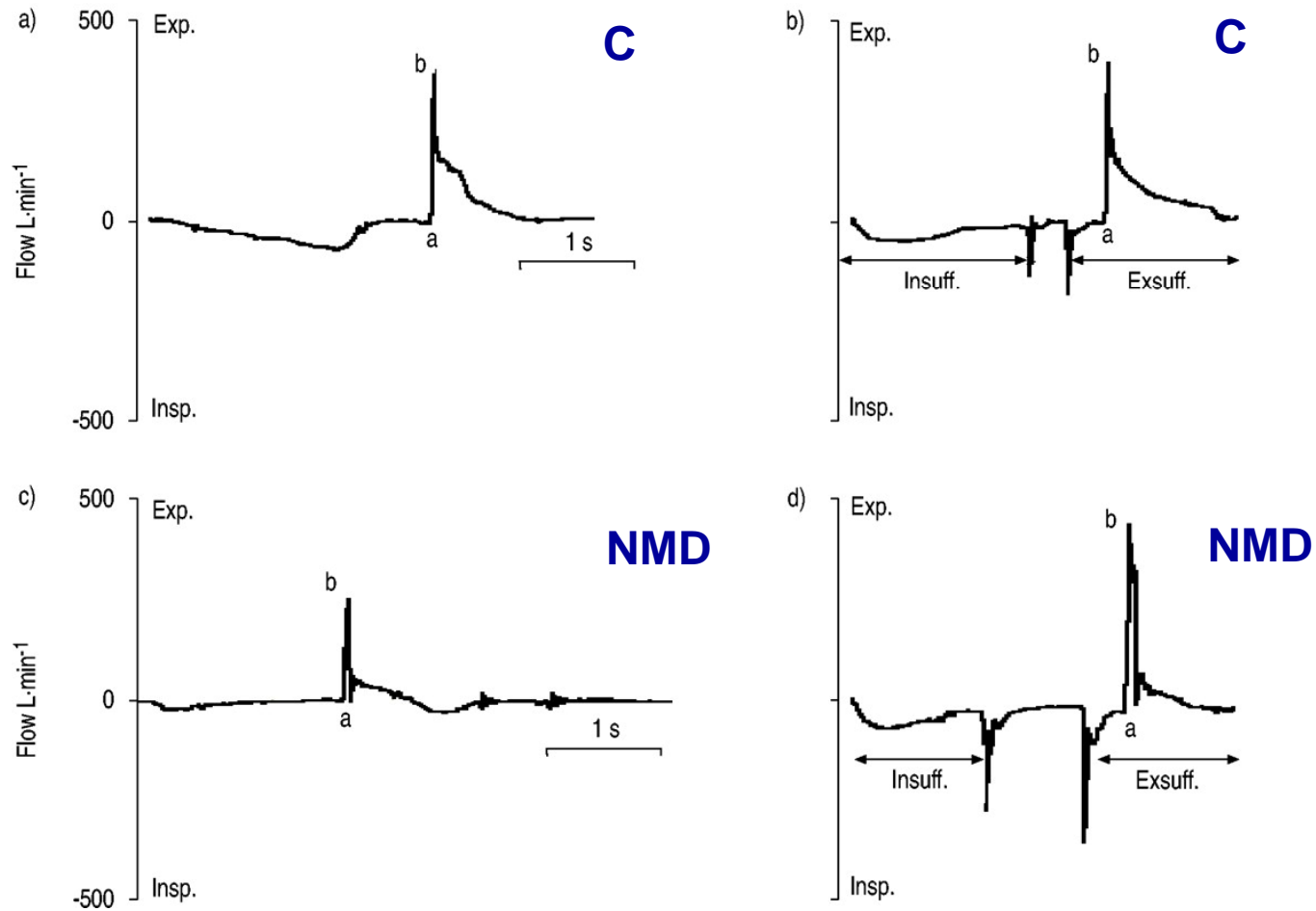


Management

■ Airway clearance

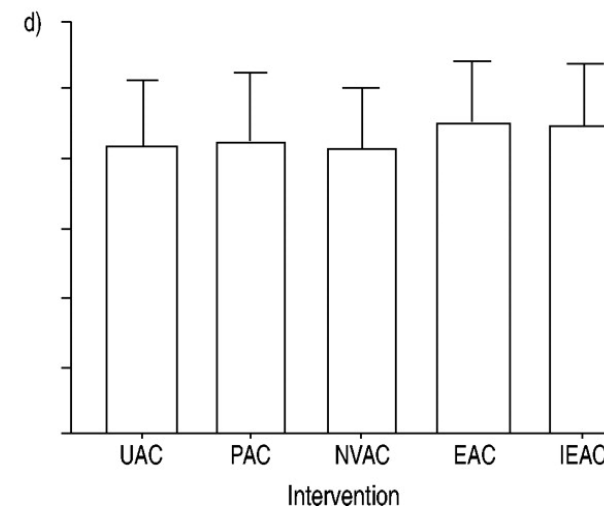
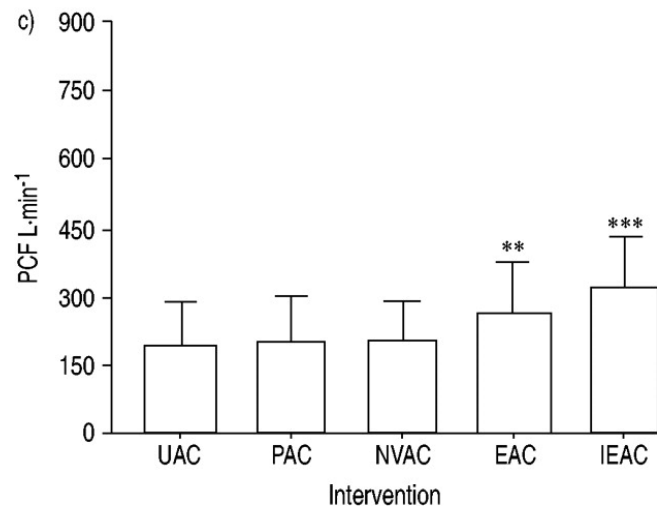
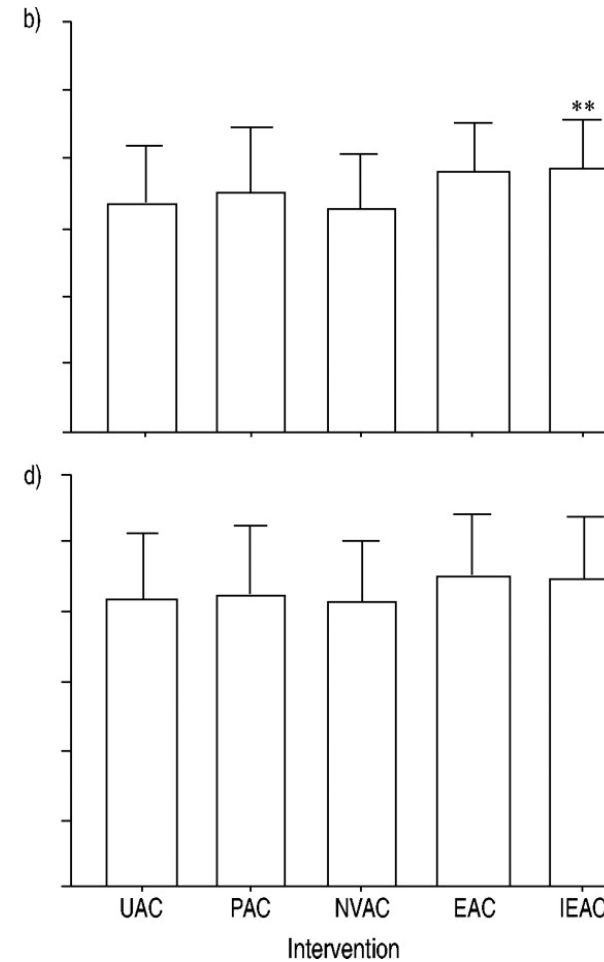
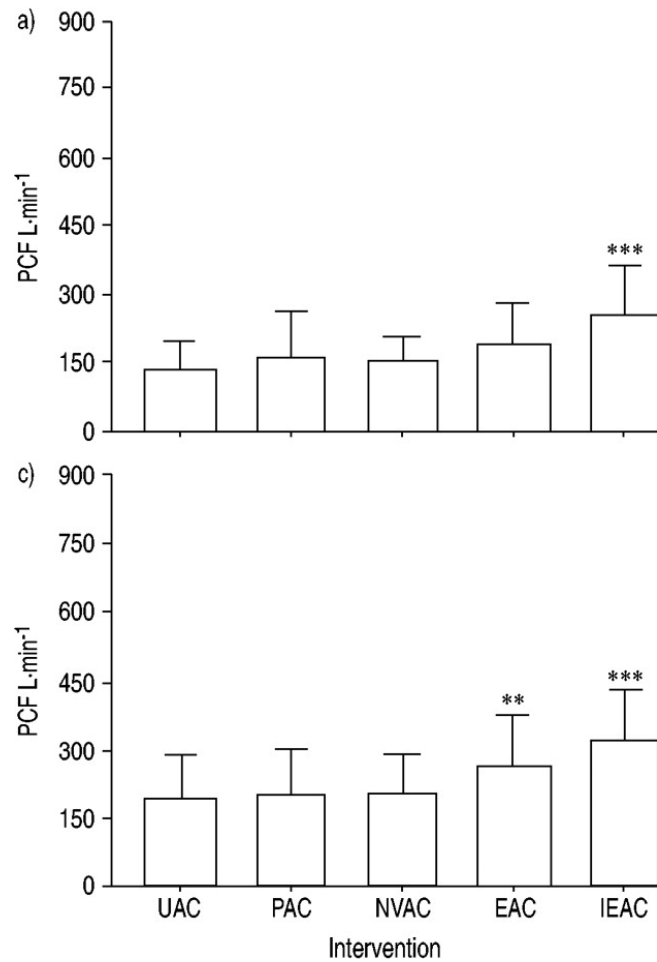
- Ineffective airway clearance can accelerate the onset of respiratory failure [Bach et al 1997]
- Peak cough flows < 160 L/min → ineffective airway clearance [Bach and Saporito 1996]
- DMD: Peak cough flow < 270 L/min or MEP < 60 cmH₂O [ATS consensus 2004]
- 3 types
 - Manual techniques – glossopharyngeal breathing, air stacking [Kang and Bach 2000]
 - Mechanical techniques – Insufflator-exsufflators [Bach 1994]
 - Mucus mobilization devices – High frequency chest wall oscillator, intrapulmonary percussive ventilation

Peak cough flow in NMD children



a,c = unassisted cough
b,d = insufflation/exsufflation cough

Chatwin et al 2003



UAC = unassisted cough
 PAC = physiotherapy assisted cough
 EAC = exsufflation assisted cough
 IEAC = insufflation-exsufflation assisted cough

a=ped NMD
b=ped control
c=adult NMD
d=adult control

Patient with SMA using the MI-E via a mouthpiece

Miske, L. J. et al. Chest 2004;125:1406-1412