

- Parent, Chmielt & Jerger (1997). First study to show improvements in speech intelligibility & quality of life with frequency lowering device (2 of 4 subjects).
- McDermott, Dorkos, Dean, & Ching (1999). Study showed small benefit associated with frequency lowering device (2 of 4 subjects).
- Turner & Hurtig (1999). Less than half of subjects showed speech recognition improvement with frequency lowering. Frequency lowering did not outperform traditional aids (n= 10).
- McDermott & Knight (2001) (n= 3); Simpson, Hersbach & McDermott (2005) (n = 17); and Simpson, Hersbach & McDermott (2006) (n = 7) all indicated that conventional hearing aids were preferred by most subjects.
- Gifford, Dorman, Spahr & McKarns (2007) concluded that for the small number of patients receiving benefit from frequency lowering devices, it comes at a cost – aversive sound quality (n =6).
- Ribeiro & Migueis (2008) indicated that a long adaptation and rehabilitation period is essential for success to occur for frequency lowering to be effective (n =8).
- Robinson, Baer & Moore (2007) Two of seven subjects improved significantly and none did worse on a VCV discrimination task (n = 7).
- Korhonen & Kuk (2008). 30 minutes of training improved scores from 25% to 48% on phoneme identification test (n = 9; all with simulated hearing loss).
- Xiao, Guangshu, Chunhong & Jia (2008). Significant improvement in speech intelligibility associated with frequency lowering after 5 weeks of training (four hours per day, 6 days per week) (n = 6).