



ProofLink™ Update

Inspiratory Flow Limitation During NREM and REM Sleep Investigated Under CPAP and C-Flex Conditions. Penzel T.

◆ ***Find This Study***

Sleep, Volume 27, Abstract Supplement # 421, 2004 p. A191

◆ ***The Study***

Study investigated the occurrence of flow limitations during inspiration in different sleep stages using the three pressure relief levels of C-Flex and CPAP.

Subjects with an AHI > 20 / hour underwent PSG with additional monitoring of respiratory flow by a pneumotachograph and respiratory effort by esophageal balloon (Pes). Effective pressure was titrated using the CPAP mode. During NREM sleep CPAP and the three levels of C-Flex were applied in a randomized order for continuous episodes of 15 minutes each. For REM sleep CPAP and the three levels of C-Flex were applied in a randomized order for five continuous minutes during three REM episodes.

Four subjects were recorded, each with a total 120 minutes of sleep. Breath by breath evaluation was performed on 7716 breaths. Inspiratory flow limitation was identified when esophageal pressure exceeded the subjects predetermined esophageal pressure determined from quite wakefulness plus two-fold standard deviation.

◆ ***The Results***

- ◆ 233 (3.1%) breaths were flow limited.
- ◆ 117 (52%) flow limited breaths occurred on CPAP. 106 (48%) flow limited breaths occurred on C-Flex.
- ◆ 117 (52%) flow limited breaths occurred in NREM sleep and 106 (48%) occurred in REM sleep
- ◆ 1 of 4 subjects had the most flow limited breaths 93 (40%)

◆ ***Note***

Results confirm what other studies have shown; flow limited breaths occur in subjects who do and do not snore even while on effective CPAP therapy. The study did demonstrate C-Flex modes show less limited breaths than CPAP.

Be aware that for C-Flex results to reach statistical strength, an increased number of subjects need to be studied under this protocol.

◆ ***Bottom Line***

There were less flow limited breaths during all three levels of C-Flex than compared to CPAP.