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**Title:** Nasal inflammation and sleep quality with continuous positive airway pressure (CPAP) therapy in obstructive sleep apnoea

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**Body:** Background: CPAP can cause undesirable nasal side effects which can significantly compromise therapy [1]. Aims and objectives: Over a 6 month period, the association between nasal inflammation using nasal wash interleukin (IL-6) and Epworth sleepiness scale (ESS) was assessed. Methods: 22 patients were recruited from the Sleep Medicine service at the Royal Free Campus, London UK with new, polysomnographically confirmed OSA. The following assessments were performed at baseline (no CPAP) and at 1, 3 and 6 months post-CPAP; nasal wash interleukin (IL)-6 and the ESS to assess the degree of daytime sleepiness. Pearson correlation was conducted to assess the relationship between nasal inflammation and sleep quality. A P value < 0.05 was considered statistical significance. Results: The 22 OSA patients (mean age±SD: 59.5±7.5 years) had an apnea hypopnea index [AHI events/h] of mean (SD) 30.2±15.9.

## Characteristics of the OSA patients

Details of subjects studied (n=22)	Mean	SD
Subjects (M/F)	13/9 (59%/41%)	
Age, years	59.5	7.5
BMI (kg/m <sup>2</sup> )	34.6	8.6
AHI (events/h)	30.2	15.9
Neck circumference	37.2	1.5
CPAP (cm H <sub>2</sub> O)	7.84	0.87
Current Smoker (%)§	22.7	

§: at recruitment to the study

We found a significant relationship between increased (IL)-6 and degree of daytime sleepiness, Pearson [ $r = 0.492$ ,  $p=0.023$ ].

Conclusion: Our results show that nasal inflammation relates to reduced sleep quality in OSA.