

## **A cephalometric comparison of subjects with snoring and obstructive sleep apnoea.**

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This prospective study analysed the upright lateral cephalometric radiographs of 115 dentate, Caucasian males. Forty-five subjects exhibited proven obstructive sleep apnoea (OSA), 46 were simple snorers, and the remaining 24 subjects, who had no history of respiratory disease and did not snore, acted as controls. Radiographs were traced and digitized, and comparisons were made of the dento-skeletal, soft tissue, and oropharyngeal features of the three groups. Differences were also sought between the snoring and OSA subjects. Of the hard tissue measurements, only the cranial base angle and mandibular body length showed significant inter-group differences ( $P < 0.001$  and  $P < 0.05$ , respectively). When the airway and associated structures were examined, both snorers and OSA subjects exhibited narrower airways, reduced oropharyngeal areas, shorter and thicker soft palates, and larger tongues than their control counterparts. Comparison of the two sleep disordered breathing groups showed no differences in any of the skeletal or dental variables examined. However in OSA subjects, the soft palate was larger and thicker ( $P < 0.05$ ), both lingual and oropharyngeal areas were increased ( $P < 0.01$  and  $P < 0.05$ , respectively) and the hyoid was further from the mandibular plane ( $P < 0.05$ ). Thus, whilst the dento-skeletal patterns of snorers resembled those of subjects with OSA, some differences in soft tissue and hyoid orientation were apparent. There was not, however, a recognizable gradation in size of the airway and its associated structures from control through snoring to OSA subjects. This suggests that there may be a cephalometrically recognizable predisposition towards the development of sleep disordered breathing, but that this is only one facet of the condition.

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