

Health Risks of Obstructive Sleep Apnea*Ip MSM**Department of Medicine, The University of Hong Kong, Hong Kong*

What is obstructive sleep apnoea (OSA) and why does it cause health risks:

Obstructive sleep apnoea refers to the occurrence of recurrent episodes of functional obstruction of the upper airway during sleep. These obstructive episodes cause intermittent hypoxaemia (despite normal lungs) and sleep fragmentation. Further downstream, systemic sequelae of neurohumeral activation, oxidative stress and inflammation may occur.

Situation in Hong Kong:

Data in early 2000s showed that about 8% of men and 4% of women had OSA, while at least half of them were symptomatic. Ethnic craniofacial morphology may contribute to the occurrence of OSA despite our lower levels of obesity.

Health risks:

Neurocognitive impairment

Excessive daytime sleepiness is a cardinal symptom of OSA, though it does not correlate tightly with the severity of OSA. Untreated OSA with daytime sleepiness in drivers may lead to traffic accidents. Neurocognitive impairment, irritability and impaired quality of life have been noted.

Cardiovascular and cerebrovascular diseases

There is consistent evidence for an adverse effect of moderate/severe OSA on blood pressure, and OSA is now included in the list of “secondary” causes of hypertension. Treatment of OSA should always be considered in the armamentarium of anti-hypertensive therapy as it carries health benefits beyond lowering of blood pressure.

Clinically, independent associations have been repeatedly reported between OSA and stroke, congestive heart failure, and atrial fibrillation, but a definitive conclusion cannot be drawn due to limitations in the available data .

Insulin resistance and diabetes mellitus

Mounting evidence suggests that OSA may have, independent of obesity, adverse effect on insulin resistance and glucose metabolism. Nonetheless, such adverse effects may pale beside that conferred by lifestyle habits of diet or physical exercise. Several longitudinal cohort studies show that OSA is associated with incident diabetes, but treatment of OSA has not been consistently demonstrated to improve glycaemic status.