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Impaired glucose-insulin metabolism in males with obstructive sleep apnoea syndrome.

Meslier N, **Gagnadoux F**, **Giraud P**, **Person C**, **Ouksel H**, **Urban T**, **Racineux JL**.

Sleep Disorders Unit, Dept of Pneumology, University Hospital, Angers, France. N.Meslier@chu-angers.fr

The aim of this cross-sectional study was to evaluate the frequency of type-2 diabetes and impaired glucose tolerance (IGT) in a large clinic-based male population presenting various degrees of obstructive sleep apnoea syndrome (OSAS) and to analyse the relationship between OSAS and glucose-insulin metabolism. Male patients (n=595) with suspected OSAS underwent both nocturnal polysomnography and a 2-h oral glucose-tolerance test with measurements of fasting and postload blood glucose and plasma insulin. Insulin sensitivity was evaluated by the ratio of fasting glucose to fasting insulin. OSAS was diagnosed in 494 patients, while 101 patients were nonapnoeic snorers. Type-2 diabetes was present in 30.1% of OSAS patients and 13.9% of nonapnoeic snorers. IGT was diagnosed in 20.0% of OSAS patients and 13.9% of nonapnoeic snorers. Fasting and postload blood glucose increased with severity of sleep apnoea. Insulin sensitivity decreased with increasing severity of sleep apnoea. In addition to body mass index and age, the apnoea/hypopnoea index independently influenced postload blood glucose and insulin sensitivity. The authors conclude that in a clinic-based sample of patients, obstructive sleep apnoea syndrome is associated with a high frequency of type-2 diabetes and impaired glucose tolerance. The relationship between sleep-disordered breathing and impaired glucose-insulin metabolism is independent of obesity and age.

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