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EAN/ERS/ESO/ESRS statement on the impact of sleep disorders on risk and outcome of stroke

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Evidence suggests a bidirectional relationship between sleep and stroke. However, the pathophysiological base of the associations and the possibilities of improving prevention and outcome through sleep-related interventions require further evaluation. http://bit.ly/36De7Cy

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ABSTRACT Sleep disorders are highly prevalent in the general population and may be linked in a bidirectional fashion to stroke, which is one of the leading causes of morbidity and mortality.

Four major scientific societies established a task force of experts in neurology, stroke, respiratory medicine, sleep medicine and methodology, to critically evaluate the evidence regarding potential links and the impact of therapy. 13 research questions were evaluated in a systematic literature search using a stepwise hierarchical approach: first, systematic reviews and meta-analyses; second, primary studies post-dating the systematic reviews/meta-analyses. A total of 445 studies were evaluated and 88 included. Statements were generated regarding current evidence and clinical practice.

Severe obstructive sleep apnoea (OSA) doubles the risk for incident stroke, especially in young to middle-aged patients. Continuous positive airway pressure (CPAP) may reduce stroke risk, especially in treatment-compliant patients. The prevalence of OSA is high in stroke patients and can be assessed by polygraphy. Severe OSA is a risk factor for recurrence of stroke and may be associated with stroke mortality, while CPAP may improve stroke outcome. It is not clear if insomnia increases stroke risk, while pharmacotherapy of insomnia may increase it. Periodic limb movements in sleep (PLMS), but not restless limb syndrome (RLS), may be associated with an increased risk of stroke. Preliminary data suggest a high frequency of post-stroke insomnia and RLS and their association with a less favourable stroke outcome, while treatment data are scarce.

Overall, the evidence base is best for OSA relationship with stroke and supports active diagnosis and therapy. Research gaps remain especially regarding insomnia and RLS/PLMS relationships with stroke.