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Sleep apnoea patients more likely to report nodding at the wheel and fail driving simulator tests

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People with sleep apnoea are more likely to fail a driving simulator test and report nodding whilst driving, according to new research.

The study will be presented today (12 April 2013) at the Sleep and Breathing Conference in Berlin, organised by the European Respiratory Society and the European Sleep Research Society.

Sleep apnoea has previously been linked with an increased chance of being involved road traffic accidents. A research team from the University Hospital in Leeds, UK, carried out two separate studies looking at the effect sleep apnoea has on driving during a simulator test, carried out at the University of Leeds.

In the first study, 133 patients with untreated sleep apnoea and 89 people without the condition took part in the test. All participants completed a 90 km motorway driving simulation and were tested on a number of key criteria, including: ablilty to complete the distance, time spent in the middle lane, an unprovoked crash or a veer event crash.

The results showed that patients with untreated sleep apnoea were more likely to fail the test. 24% of the sleep apnoea patients failed the test, compared to 12% of the people without the condition. Many patients with sleep apnoea were unable to complete the test, had more unprovoked crashes and could not adhere to the clear driving instructions

given at the beginning of the simulator test.

In the second study, 118 patients with untreated sleep apnoea and 69 people without the condition completed a questionnaire about their driving behaviour and undertook the 90 km driving test on the simulator.

35% of patients with sleep apnoea admitted to nodding at the wheel and subsequently 38% of this group failed the test. This compared to 11% of people without the condition admitting to nodding and none of this group failing the test.

Chief investigator, Dr. Mark Elliott, commented: "Driving simulators can be a good way of checking the effects that a condition like sleep apnoea can have on driving ability. Our research suggests that people with the condition are more likely to fail the test.

"In the first study, although some people in the control group also failed the test, there were several key differences in the reasons for failure. For example 13 patients were unable to complete the test because they fell asleep, veered completely off the motorway and 5 patients because they spent more than 5% of the study outside the lane that they had been instructed to remain in. No controls failed for either of these reasons. Further investigation is needed to examine the reasons for failure of the simulator test."

Dan Smyth, Sleep Apnoea Europe, said: "The dangers of untreated sleep apnoea and driving are highlighted in both studies. These studies give weight to the need for provision of sufficient resources for early diagnosis and treatment of sleep apnoea, where effective treatment ensures a return to acceptable risk levels for road users."

More information: First study: Abstract: Thematic poster: Comparing outcomes of an office-based advanced driving simulator (MiniSIM)

between Obstructive Sleep Apnoea Syndrome (OSAS) patients and controls, Session: 12 April 2013, 13.45-14.45

Second study: Abstract: Reported incidence of nodding whilst driving and its impact on simulator outcomes in Obstructive Sleep Apnoea Syndrome (OSAS) patients and controls, Session: 12 April 2013, 13.45-14.45

Provided by European Lung Foundation

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