

ResMed Highlights Its Top Picks in 2014 Sleep Apnea Research for World Sleep Day

SAN DIEGO – March 13, 2015 – In recognition of World Sleep Day, ResMed (NYSE:RMD) highlights its picks for top five 2014 research discoveries related to sleep apnea. Together, these findings reinforce not only the impact that untreated sleep apnea can have on overall health and wellness, but also the role that consistent treatment with available therapies can play in improving sleep-disordered breathing, sleep apnea and related conditions.

1. Sleep apnea factors are associated with up to 50 percent increased risk of certain cardiovascular outcomes

Obstructive sleep apnea (OSA) factors, such as the number of awakenings, mean heart rate, total sleep time, sleep time spent with oxygen saturation <90%, or presence of excessive daytime sleepiness, were associated with a five to 50% percent increased risk of experiencing cardiovascular outcomes.

[Obstructive sleep apnea and risk of cardiovascular events and all-cause mortality: A decade-long historical cohort study. (Kendzerska *et al.*, 2014 *PLoS Medicine*)]

2. Continuous Positive Airway Pressure (CPAP) therapy leads to better-controlled diabetes

In this case-controlled study of OSA patients with Type 2 Diabetes, CPAP was found to be a cost-effective treatment leading to significantly lower blood pressure and better-controlled diabetes, affording a cost-effective use of National Health Services resources. Widely accepted as the gold standard, CPAP therapy involves wearing a mask or nasal pillows system connected to a small portable airflow generator that delivers air at positive pressure, creating an air splint to keep the airway open.

[Clinical outcomes and cost-effectiveness of CPAP to manage OSA in patients with Type 2 Diabetes in the UK. (Guest *et al.*, 2014 *Diabetes Care*)]

3. OSA recurs after four nights of CPAP withdrawal in majority of patients

In more than 70% of patients studied, OSA recurred after four nights of withdrawal from CPAP therapy. Additionally, patients with higher risk factors for OSA prior to starting therapy had worse OSA symptoms upon CPAP withdrawal. These results demonstrate the importance of consistent therapy usage.

[Is continuous positive airway pressure necessarily an everyday therapy in patients with obstructive sleep apnea? (Rossi *et al.*, 2014 *Eur Respir J*)]

4. CPAP reduces sleep apnea-related risk of car accidents

Sleepiness at the wheel is a major cause of motor vehicle accidents. A Swedish traffic study that addressed a large, well-characterized patient cohort referred for OSA investigation found that the incidence of motor vehicle accidents was reduced by 70% among OSA patients with high CPAP compliance, whereas it increased 54% among non-compliant patients. During the corresponding time window from 2007 to 2012, there was an observed decrease of accidents by 15.9% in the Swedish Traffic Accident Registry. The study results demonstrate CPAP's success in treating OSA patients, while the motor vehicle accident risk in these OSA patients suggests a need for accurate tools to identify individuals at risk.

[Sleep-Apnea Related Risk of Motor Vehicle Accidents is Reduced by Continuous Positive Airway Pressure: Swedish Traffic Accident Registry Data. (Karimi *et al.*, 2014 *Sleep*)]

5. Overwhelming majority of patients with complex sleep apnea experience positive results with adaptive servo-ventilation (ASV)

While two-thirds of participants in this study experienced success with CPAP, approximately 90% experienced success with ASV at 90 days of therapy. ASV is a method of ventilator support aimed to treat central sleep apnea, and is currently being investigated as a treatment option for sleep apnea patients with heart failure and other cardiovascular conditions.

[The complex sleep apnea resolution study: a prospective randomized controlled trial of continuous positive airway pressure versus adaptive servo ventilation therapy. (Morgenthaler *et al.*, 2014 *Sleep*)]

Together, the research findings show that consistent sleep apnea treatment with CPAP and ASV therapies not

only significantly improves apnea symptoms, but can also positively impact several comorbid disease types and everyday functionality. Sleep apnea continues to be strongly linked to both cardiovascular conditions and diabetes as demonstrated in several studies above, as well as hypertension, stroke, cancer, and obesity.

“2014 was a big year for sleep apnea research, as it revealed more helpful discoveries about the disease and its relationship with costly chronic conditions and related events that can occur,” said Adam Benjafield, Ph.D., ResMed vice president of medical affairs. “Looking forward, 2015 promises to be just as productive with new advances, technologies and discoveries to help us in our mission to curb the widespread impact sleep apnea has on health, quality of life, and our healthcare system overall.”

For more information on sleep apnea or available treatment options visit www.ResMed.com.

About Sleep-Disordered Breathing, including Sleep Apnea

Sleep-Disordered Breathing (SDB) describes a group of disorders characterized by abnormal respiratory patterns (e.g. the presence of apneas or hypopneas) or insufficient ventilation during sleep. There are three main types of SDB as manifested in sleep apnea: obstructive sleep apnea, central sleep apnea, and mixed sleep apnea. Typical symptoms of sleep apnea include constant tiredness, poor concentration, morning headaches, depressed mood, night sweats, weight gain, lack of energy, forgetfulness, sexual dysfunction, and frequent urination at night. For more information, or to take a short sleep quiz, visit www.WakeUpToSleep.com.

About ResMed

ResMed changes lives by developing, manufacturing and distributing medical equipment for treating, diagnosing, and managing sleep-disordered breathing, COPD, and other chronic diseases. We develop innovative products and solutions to improve the health and quality of life of those who suffer from these conditions, and we work to raise awareness of the potentially serious health consequences of untreated sleep-disordered breathing.

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