Sleep Publications featuring Sentec's Transcutaneous Monitoring System

At Sentec, we believe research and clinical evidence is a critical component to building effective noninvasive technology. Below is a library of published research for you to explore that highlights the impact our Transcutaneous Monitoring System (TCM) can have when providing less invasive sleep care.

Adult | Pediatric & Neonatal

Mycroft, K., et. al. (2021). Complex home assessment of long-term non-invasive ventilation efficacy using transcutaneous monitoring of PCO2 and polygraphy – A feasibility study. *Advances in Medical Sciences, 66(1),* 105-112.

De Braekeleer, K., & Toussaint, M. (2020). Transcutaneous Carbon Dioxide Measurement in Adult Patients with Neuromuscular Disorders: A quality Level Assessment. *J Neuromuscul Dis*.

Duiverman, M. L., et al. (2020). Home initiation of chronic non-invasive ventilation in COPD patients with chronic hypercapnic respiratory failure: a randomised controlled trial. *Thorax, 75(3),* 244–252.

Boentert, M. (2019). Sleep disturbances in patients with amyotrophic lateral sclerosis: current perspectives. *Nat Sci Sleep, 11*, 97–111.

Storre, J. H., et al. (2018). Home noninvasive ventilatory support for patients with chronic obstructive pulmonary disease: patient selection and perspectives. *International journal of chronic obstructive pulmonary disease*, 13, 753–760.

Schwarz, S. B., et al. (2018). Is Outpatient Control of Long-Term Non-Invasive Ventilation Feasible in Chronic Obstructive Pulmonary Disease Patients? *Respiration, 95(3)*, 154–160.

Chhajed, P. N., et al. (2016). Utility of Transcutaneous Capnography for Optimization of Non-Invasive Ventilation Pressures. *JCDR, Vol-10 (9)* (September), OC06–OC09.

Aarrestad, S., et al. (2016). Validity of transcutaneous PCO2 in monitoring chronic hypoventilation treated with non-invasive ventilation. *Respir Med,* 112, 112–118.

Bauman, K. A., et al. (2015). Simplified Approach to Diagnosing Sleep-Disordered Breathing and Nocturnal Hypercapnia in Individuals With Spinal Cord Injury. *Arch Phys Med Rehabil, 97(3)*, 363–371.

Viau, F. (2013). Monitorage de la PCO2 transcutanée en médecine du sommeil. *J.msom, 10(4)*, 171–177.

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Storre, J. H., et al. (2012). Impact of long-term target-volume noninvasive positive pressure ventilation on sleep quality. In *European Respiratory Society, Annual Meeting*. ERS.

Soon Kyu Lee, D. -hyun K., et al. (2012). The Significance of Transcutaneous Continuous Overnight CO2 Monitoring in Determining Initial Mechanical Ventilator Application for Patients with Neuromuscular Disease. *ARM, 36(1)*, 126–132.

Nardi, J., et al. (2012). Efficiency of invasive mechanical ventilation during sleep in Duchenne muscular dystrophy. *Sleep Med, 13(8)*, 1056–1065.

Stagnara, A., et al. (2011). Faut-il s'intéresser au sommeil des patients polyhandicapés? Should be interested in the sleep of patients with polyhandicap? *Motricité cérébrale, 32(3)*, 98–105.

Storre, J. H., et al. (2010). Transcutaneous monitoring as a replacement for arterial PCO(2) monitoring during nocturnal non-invasive ventilation. *Respir Med, 105(1)*, 143–150.

Storre, J. H., et al. (2010). Transcutaneous PCO2 Monitoring Is Accurate For Assessing PaCO2 During Nocturnal Noninvasive Ventilation. In *Am. J. Respir. Crit. Care Med.* (Vol. 181, A3064).

Adult | **Pediatric & Neonatal**

Dicembrino, M., et al. (2021). End-tidal CO2 and transcutaneous CO2: Are we ready to replace arterial CO2 in awake children? *Pediatric Pulmonology*, 56, 486– 494.

Shi, J., et al. (2020). The Diagnostic Accuracy and Reliability of Transcutaneous Carbon Dioxide Monitoring at Home for Nocturnal Hypoventilation Screening in Children with Neuromuscular Disease. *Respiratory Care, 158(4)*.

Griffon, L., et al. (2020). Home Overnight Gas Exchange for Long-Term Noninvasive Ventilation in *Children. Respir Care*.

Tabone, L., et al. (2019). Cerebral Oxygenation During Respiratory Events in Children with Sleep-Disordered Breathing and Associated Disorders. *J Pediatr*.

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Amaddeo, A., & Fauroux, B. (2015). Oxygen and carbon dioxide monitoring during sleep. *Paediatr Respir Rev*.

Caldarelli, V., et al. (2013). Polygraphic respiratory events during sleep with noninvasive ventilation in children: description, prevalence, and clinical consequences. *Intensive Care Med, 39(4)*, 739–746.

Krivec, U., et al. (2012). Nocturnal hypoxemia, but not hypercapnia, correlates with sleep quality in children. *Respir Care, 57(11)*, 1937–1944.

Ramirez, A., et al. (2012). Assessment of sleep quality by pulse wave amplitude and actigraphy in children with sleep-disordered breathing: evaluation at diagnosis and under non-invasive ventilation. *Sleep Breath*.

Fauroux, B., et al. (2012). Sleep quality and nocturnal hypoxaemia and hypercapnia in children and young adults with cystic fibrosis. *Arch Dis Child, 97(11)*, 960–966.

Bersanini, C., et al. (2012). Nocturnal hypoxaemia and hypercapnia in children with neuromuscular disorders. *Eur Respir J, 39(5)*, 1206–1212.

Felemban, O., et al. (2011). Value of gas exchange recording at home in children receiving non-invasive ventilation. *Pediatr Pulmonol, 46(8)*, 802–808.

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For more information about our Transcutaneous Monitoring System, contact us.