Potencial terapéutico de la hipoxia intermitente

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Recibido: 27 de marzo de 2015
Aceptado: 22 de abril de 2015

ABSTRACT

Therapeutic potential of intermittent hypoxia

Intermittent Hypoxia (IH) is a subject of considerable interest and controversy since it has both beneficial and adverse effects. Unfortunately, a lack of consistency in the use of the term “intermittent hypoxia” has led to considerable confusion in the field. In reviewing available literature, the physiological and pathological impact of IH appears to be highly associated with the effective IH “dose”. IH consisting of modest hypoxic episodes (≥ 9% inspired O₂) and lesser numbers of hypoxia/re-oxygenation events per day (≤ 15 cycles/day) are generally associated with beneficial effects in multiple body systems. In contrast, severe hypoxic episodes (< 9% inspired oxygen) and more frequent hypoxic episodes per day (40-2,400 cycles/day) shift the balance towards morbidity. Evidence demonstrates that a moderate dose of IH promotes a serotonin-dependent spinal neuroplasticity which can be harnessed as a potential therapeutic approach to improve respiratory and somatic function in spinal cord injured patients. Although this therapy is in a period of initial translational development, it could represent a simple, safe and effective way to promote therapeutic effects in different clinical conditions including neurological disorders such as spinal cord injuries.

Key words: Intermittent hypoxia, therapeutic effects, spinal cord injury, neuroplasticity.

This article was partially translated and adapted from the original book “Translational research in environmental and occupational stress” Chapter 4: Therapeutic Potential of Intermittent Hypoxia: Lessons from Respiratory Motor Plasticity. Authors: Navarrete-Opazo Angela, Dale E, Mitchell G. Editorial: Springer India, New Delhi, 2014.