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[Research advances on hydrogen therapy in nervous system diseases]

[Article in Chinese]

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Abstract

Oxidative stress plays a pivotal role in the pathogenesis of varied nervous system diseases. Recent studies have demonstrated that hydrogen has selective antioxidative effect. It selectively reduces the hydroxyl radical (*OH) and peroxynitrite (ONOO(-)), the most cytotoxic of reactive oxygen species (ROS); however, it does not affect other ROS, which play important physiological roles at low concentrations. A large body of experimental studies has proved that hydrogen, through anti-oxidation, anti-inflammatory and inhibiting apoptosis, has a significant therapeutic effect in various neurological diseases, such as ischemia, hypoxia, degeneration and spinal cord contusion. It provides us with a new clinical method for the prevention and treatment of neurological diseases.

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