

# Effect of therapeutic touch on brain activation of preterm infants...

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Full title: Effect of therapeutic touch on brain activation of preterm infants in response to sensory punctate stimulus: a near-infrared spectroscopy-based study.

The purpose of this study was to determine whether therapeutic touch in preterm infants can ameliorate their sensory punctate stimulus response in terms of brain activation measured by near-infrared spectroscopy. The study included 10 preterm infants at 34-40 weeks' corrected age. Oxyhaemoglobin (Oxy-Hb) concentration, heart rate (HR), arterial oxygen saturation (SaO<sub>2</sub>) and body movements were recorded during low-intensity sensory punctate stimulation for 1 s with and without therapeutic touch by a neonatal development specialist nurse. Each stimulation was followed by a resting phase of 30 s. All measurements were performed with the infants asleep in the prone position. sensory punctate stimulus exposure significantly increased the oxy-Hb concentration but did not affect HR, SaO<sub>2</sub> and body movements. The infants receiving therapeutic touch had significantly decreased oxy-Hb concentrations over time. Therapeutic touch in preterm infants can ameliorate their sensory punctate stimulus response in terms of brain activation, indicated by increased cerebral oxygenation. Therefore, therapeutic touch may have a protective effect on the autoregulation of cerebral blood flow during sensory punctate stimulus in neonates.

Arch Dis Child Fetal Neonatal Ed. 2012 Jul 21. Honda N, Ohgi S, Wada N, Loo KK, Higashimoto Y, Fukuda K. 1Department of Rehabilitation, Kinki University Faculty of Medicine, Osakasayama, Osaka, Japan.

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