

# Hypnotic relaxation results in elevated thresholds of sensory detection but not of pain detection.

Posted At : March 19, 2015 12:22 PM | Posted By : [Tim Brunson, PhD](#)

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**BACKGROUND:** Many studies show an effectiveness of hypnotic analgesia. It has been discussed whether the analgesic effect is mainly caused by the relaxation that is concomitant to hypnosis. This study was designed to evaluate the effects of hypnotic relaxation suggestion on different somatosensory detection and pain thresholds.

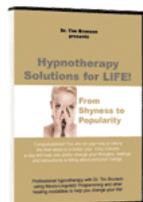
**METHODS:** Quantitative sensory testing (QST) measurements were performed before and during hypnosis in twenty-three healthy subjects on the dorsum of the right hand. Paired t-test was used to compare threshold changes. The influence of hypnotic susceptibility was evaluated by calculating correlation coefficients for threshold changes and hypnotic susceptibility (Harvard group scale).

**RESULTS:** During hypnosis significantly changed somatosensory thresholds (reduced function) were observed for the following sensory detection thresholds: Cold Detection Threshold (CDT), Warm Detection Threshold (WDT), Thermal Sensory Limen (TSL) and Mechanical Detection Threshold (MDT). The only unchanged sensory detection threshold was Vibration Detection Threshold (VDT). No significant changes were observed for the determined pain detection thresholds (Cold Pain Thresholds, Heat Pain Thresholds, Mechanical Pain Sensitivity, Dynamic Mechanical Allodynia, Wind-up Ratio and Pressure Pain Threshold). No correlation of hypnotic susceptibility and threshold changes were detected.

**CONCLUSION:** Hypnotic relaxation without a specific analgesic suggestion results in thermal and mechanical detection, but not pain threshold changes. We thus conclude that a relaxation suggestion has no genuine effect on sensory pain thresholds.

**TRIAL REGISTRATION:** ClinicalTrials.gov, Identifier: NCT02261155 (9th October 2014).

BMC Complement Altern Med. 2014 Dec 15;14:496. doi: 10.1186/1472-6882-14-496. Kramer S1, Zims R, Simang M, Ruger L, Irnich D.



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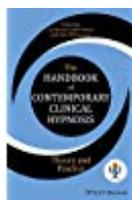
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