

# Acupuncture attenuates autonomic responses to smoking-related visual cues.

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## Abstract

**OBJECTIVES:** In smokers, smoking-associated cues produce smoking urges and cravings, which are accompanied by autonomic dysfunction in response to these cues. We investigated whether or not acupuncture ameliorated cigarette withdrawal symptoms, as well as attenuated the autonomic responses to smoking-related visual cues in smokers using a power spectrum analysis of heart rate variability (HRV).

**INTERVENTIONS:** Fifteen subjects were treated with real acupuncture (RA) at HT7 and 14 subjects received sham acupuncture (SA) at LI10 using the Park Sham Device.

**MAIN OUTCOME MEASURE:** The cigarette withdrawal scale (CWS) was measured on the third day after the subjects had quit smoking. We compared the low-frequency/high-frequency (HF/LF) ratio in the HRV of the RA and SA groups during a distraction task using neutral and smoking visual cues.

**RESULTS:** The CWS of the RA group was significantly lower than that of the SA group. The increase in the LF/HF ratio of HRV induced by the smoking-related visual cues was also significantly lower in the RA group when compared with the SA group. Acupuncture not only ameliorated cigarette withdrawal, but also weakened the autonomic responses to smoking cues during withdrawal.

**CONCLUSIONS:** These findings suggest that acupuncture might help in smoking cessation by attenuating withdrawal symptoms and smoking cues-induced autonomic responses.

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