

# **A brief relaxation intervention reduces stress and improves surgical wound healing response: a randomised trial.**

[Broadbent E](#), [Kahokehr A](#), [Booth RJ](#), [Thomas J](#), [Windsor JA](#), [Buchanan CM](#), [Wheeler BR](#), [Sammour T](#), [Hill AG](#).

## **Source**

Department of Psychological Medicine, The University of Auckland, New Zealand.  
e.broadbent@auckland.ac.nz

## **Abstract**

Psychological stress has been shown to impair wound healing, but experimental research in surgical patients is lacking. This study investigated whether a brief psychological intervention could reduce stress and improve wound healing in surgical patients. This randomised controlled trial was conducted at a surgical centre. Inclusion criteria were English-speaking patients over 18 years booked to undergo elective laparoscopic cholecystectomy; exclusion criteria were cancellation of surgery, medical complications, and refusal of consent. Seventy five patients were randomised and 15 patients were excluded; 60 patients completed the study (15 male, 45 female). Participants were randomised to receive standard care or standard care plus a 45-min psychological intervention that included relaxation and guided imagery with take-home relaxation CDs for listening to for 3 days before and 7 days after surgery. In both groups ePTFE tubes were inserted during surgery and removed at 7 days after surgery and analysed for hydroxyproline as a measure of collagen deposition and wound healing. Change in perceived stress from before surgery to 7-day follow-up was assessed using questionnaires. Intervention group patients showed a reduction in perceived stress compared with the control group, controlling for age. Patients in the intervention group had higher hydroxyproline deposition in the wound than did control group patients (difference in means 0.35, 95% CI 0.66-0.03;  $t(43)=2.23$ ,  $p=0.03$ ). Changes in perceived stress were not associated with hydroxyproline deposition. A brief relaxation intervention prior to surgery can reduce stress and improve the wound healing response in surgical patients. The intervention may have particular clinical application for those at risk of poor healing following surgery.

Copyright © 2011 Elsevier Inc. All rights reserved.

PMID:

21741471

[PubMed - indexed for MEDLINE]