
Objectives: We conducted a systematic review that aimed to document and describe how (1) expectation of benefit from treatment (response expectancies) were measured and reported in acupuncture trials, and (2) examine any effect on outcomes.

Design: We searched MEDLINE, EMBASE, AMED, CIHAHL, CENTRAL and Science and Technology Proceedings up to November 2007 for randomised (RCT) and quasi-randomised (CCT) controlled trials and prospective controlled cohorts of acupuncture as treatment for a medical or psychological condition in adults. An update citation search was conducted in April 2010. We included studies that mentioned soliciting response expectancies.

Results: We found 58 RCTs that fulfilled our inclusion criteria. Around half referenced one of five published instruments, most of which were designed to measure sham credibility and included one question on response expectancy. A wide range of question phrasing and response scales was used. There was some evidence that response scales may influence the measurement of expectations. Eight trials analysed the association between pre-randomisation expectations for assigned treatment and outcomes, and six the effect of pre-randomisation expectations across all patients independent of treatment allocation. Some showed associations but others did not.

Conclusions: There is some evidence that response expectancies interact with outcomes in acupuncture trials however the variety of question phrasing and analysis methods precludes drawing a firm conclusion about for whom and under which circumstance. To further our understanding of expectations, more methodological work is needed to standardise the questions and response scales that are used.


Objectives: To assess the efficacy and safety of self-administered acupressure to alleviate symptoms of various health problems, including allergic disease, cancer, respiratory disease, dysmenorrhea, perceived stress, insomnia, and sleep disturbances.

Methods: We searched core, Korean, Chinese, and Japanese databases, including Ovid-MEDLINE, Ovid-EMBASE, the Cochrane Central Register of Controlled Trials (CENTRAL), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), six representative electronic Korean medical databases, China National Knowledge Infrastructure (CNKI), and Japan Science and Technology Information Aggregator (J-STAGE). We included randomized controlled trials (RCTs) and quasi-RCTs that examined disease-specific effects or symptom relief, adverse reactions, and quality-of-life (QOL) for self-administered acupressure. Data collection and assessment of the methodological quality of the included studies were conducted by two independent reviewers.

Results: Eight RCTs and two quasi-RCTs showed positive effects and safety of self-acupressure therapy in clinically diverse populations. Quality assessment revealed moderate quality for the RCTs, with 50% or more of the trials assessed as presenting a low risk of bias in seven domains. All of the selected 10 studies reported positive effects for primary outcomes of self-acupressure therapy for symptom management, including significant improvements in symptom scores in allergic disease, nausea and vomiting in cancer, symptom scores in respiratory disease, pain symptoms in dysmenorrhea, and stress/fatigue scores and sleep disturbances in healthy people.

Conclusions: Our findings suggest that self-administered acupressure shows promise to alleviate the symptoms of various health problems. Therefore, further research with larger samples and methodologically well-designed RCTs is required to establish the efficacy of self-administered acupressure.
The aim of this study was to compare behavioral and functional brain responses to the act of inserting needles into the body in two different contexts, treatment and stimulation, and to determine whether the behavioral and functional brain responses to a subsequent pain stimulus were also context dependent. Twenty-four participants were randomly divided into two groups: an acupuncture treatment (AT) group and an acupuncture stimulation (AS) group. Each participant received three different types of stimuli, consisting of tactile, acupuncture, and pain stimuli, and was given behavioral assessments during fMRI scanning. Although the applied stimuli were physically identical in both groups, the verbal instructions differed: participants in the AS group were primed to consider the acupuncture as a painful stimulus, whereas the participants in the AT group were told that the acupuncture was part of therapeutic treatment. Acupuncture yielded greater brain activation in reward-related brain areas (ventral striatum) of the brain in the AT group when compared to the AS group. Brain activation in response to pain stimuli was significantly attenuated in the bilateral secondary somatosensory cortex and the right dorsolateral prefrontal cortex after prior acupuncture needle stimulation in the AT group but not in the AS group. Inserting needles into the body in the context of treatment activated reward circuitries in the brain and modulated pain responses in the pain matrix. Our findings suggest that pain induced by therapeutic tools in the context of a treatment is modulated differently in the brain, demonstrating the power of context in medical practice.


Studies have explored the predictors of CAM use but fewer data explain the psychosocial factors associated with this and why people continue with CAM.

**Aims:** To examine the psychosocial factors that predict CAM use; to explore the predictors of continuing with CAM.

**Design:** A cross sectional survey.

**Methods:** 1,256 adults were interviewed as part of 2012 Queensland Social Survey. We included questions about CAM, perceived control, cognitive style, spirituality and openness. Relationships were explored using bivariate and multiple logistic regression.

**Results:** 79% of people had used CAM in the last 12 months. Socio-demographics, health behaviours, spirituality, openness and prescribing sources were the strongest predictors of CAM use. General health, chronic illness and prescribing sources predicted continued CAM use.

**Conclusion:** There was high CAM use in Queensland, Australia. Personal characteristics and psychosocial factors need to be considered as part of the individual’s holistic assessment and on-going care.


Children with acute respiratory or ear infections (RTI/OM) are often unnecessarily prescribed antibiotics. Antibiotic resistance is a major public health problem and antibiotic prescription for RTI/OM should be reduced. Anthroposophic treatment of RTI/OM includes anthroposophic medications, nonmedication therapy and if necessary also antibiotics. This secondary analysis from an observational study comprised 529 children <18 years from Europe (AT, DE, NL, and UK) or USA, whose caregivers had chosen to consult physicians offering anthroposophic (A-) or conventional (C-) treatment for RTI/OM. During the 28-day follow-up antibiotics were prescribed to 5.5% of A-patients and 25.6% of C-patients (P < 0.001); unadjusted odds ratio for nonprescription in A- versus C-patients 6.58 (95%-CI 3.45–12.56); after adjustment for demographics and morbidity 6.33 (3.17–12.64). Antibiotic prescription rates in recent observational studies with similar patients in similar settings, ranged from 31.0% to 84.1%. Compared to C-patients, A-patients also had much lower use of analgesics, somewhat quicker symptom resolution, and higher caregiver satisfaction. Adverse drug reactions were infrequent (2.3% in both groups) and not serious. Limitation was that results apply to children of caregivers who consult A-physicians. One cannot infer to what extent antibiotics might be avoided in children who usually receive C-treatment, if they were offered A-treatment.


This study examined the effects of Tai Chi, a low-impact mind-body movement therapy, on severity of depression, anxiety, and stress symptoms in centrally obese people with elevated depression symptoms. In total, 213 participants were randomized to a 24-week Tai Chi intervention program or a wait-list control group. Assessments were conducted at baseline and 12 and 24 weeks. Outcomes were severity of depression, anxiety, and stress symptoms, leg strength, central obesity, and other measures of metabolic symptom. There were statistically significant between-group differences in favor of the Tai Chi group in depression (mean difference = −5.6 units, P < 0.001), anxiety (−2.3 units, P < 0.01), and stress (−3.6 units, P < 0.001) symptom scores and leg strength (1.1 units, P < 0.001) at 12 weeks. These changes were further improved or maintained in the Tai Chi group relative to the control group during the second 12 weeks of follow-up. Tai Chi appears to be beneficial for reducing severity of depression, anxiety, and stress and leg strength in centrally obese people with depression symptoms. More studies with longer follow-up are needed to confirm the findings. This trial is registered with ACTRN12613000010796.

Excess body weight and adiposity cause insulin resistance, inflammation, and numerous other alterations in metabolic and hormonal factors that promote atherosclerosis, tumorigenesis, neurodegeneration, and aging. Studies in both animals and humans have demonstrated a beneficial role of dietary restriction and leanness in promoting health and longevity. Epidemiological studies have found strong direct associations between increasing body mass index (BMI) and risks of developing type 2 diabetes, cardiovascular disease, and several types of cancer, beginning from BMI of 20–21 kg/m². Although a recent meta-analysis suggests that overweight individuals have significantly lower overall mortality than normal-weight individuals, these data are likely to be an artifact produced by serious methodological problems, especially confounding by smoking, reverse causation due to existing chronic disease, and nonspecific loss of lean mass and function in the frail elderly. From a clinical and public health point of view, maintaining a healthy weight through diet and physical activity should remain the cornerstone in the prevention of chronic diseases and the promotion of healthy aging.


Background: Excess body weight, physical activity, smoking, alcohol consumption and certain dietary factors are individually related to colorectal cancer (CRC) risk; however, little is known about their joint effects. The aim of this study was to develop a healthy lifestyle index (HLI) composed of five potentially modifiable lifestyle factors – healthy weight, physical activity, non-smoking, limited alcohol consumption and a healthy diet, and to explore the association of this index with CRC incidence using data collected within the European Prospective Investigation into Cancer and Nutrition (EPIC) cohort.

Methods: In the EPIC cohort, a total of 347,237 men and women, 25- to 70-years old, provided dietary and lifestyle information at study baseline (1992 to 2000). Over a median follow-up time of 12 years, 3,759 incident CRC cases were identified. The association between a HLI and CRC risk was evaluated using Cox proportional hazards regression models and population attributable risks (PARs) have been calculated.

Results: After accounting for study centre, age, sex and education, compared with 0 or 1 healthy lifestyle factors, the hazard ratio (HR) for CRC was 0.87 (95% confidence interval (CI): 0.44 to 0.77) for two factors, 0.79 (95% CI: 0.70 to 0.89) for three factors, 0.66 (95% CI: 0.58 to 0.75) for four factors and 0.63 (95% CI: 0.54 to 0.74) for five factors; P-trend <0.0001. The associations were present for both colon and rectal cancers, HRs, 0.61 (95% CI: 0.50 to 0.74; P for trend <0.0001) for colon cancer and 0.68 (95% CI: 0.53 to 0.88; P-trend <0.0001) for rectal cancer, respectively (P-difference by cancer sub-site = 0.10). Overall, 16% of the new CRC cases (22% in men and 11% in women) were attributable to not adhering to a combination of all five healthy lifestyle behaviours included in the index.

Conclusions: Combined lifestyle factors are associated with a lower incidence of CRC in European populations characterized by western lifestyles. Prevention strategies considering complex targeting of multiple lifestyle factors may provide practical means for improved CRC prevention.