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## [Intervention Review]

# Acupuncture for depression

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## ABSTRACT

## Background

Depression is recognised as a major public health problem that has a substantial impact on individuals and on society. People with depression may consider using complementary therapies such as acupuncture, and an increasing body of research has been undertaken to assess the effectiveness of acupuncture for treatment of individuals with depression. This is the second update of this review.

## Objectives

To examine the effectiveness and adverse effects of acupuncture for treatment of individuals with depression.

To determine:

• Whether acupuncture is more effective than treatment as usual/no treatment/wait list control for treating and improving quality of life for individuals with depression.

• Whether acupuncture is more effective than control acupuncture for treating and improving quality of life for individuals with depression.

• Whether acupuncture is more effective than pharmacological therapies for treating and improving quality of life for individuals with depression.

• Whether acupuncture plus pharmacological therapy is more effective than pharmacological therapy alone for treating and improving quality of life for individuals with depression.

• Whether acupuncture is more effective than psychological therapies for treating and improving quality of life for individuals with depression.

• Adverse effects of acupuncture compared with treatment as usual/no treatment/wait list control, control acupuncture, pharmacological therapies, and psychological therapies for treatment of individuals with depression.

#### Search methods

We searched the following databases to June 2016: Cochrane Common Mental Disorders Group Controlled Trials Register (CCMD-CTR), Korean Studies Information Service System (KISS), DBPIA (Korean article database website), Korea Institute of Science and Technology Information, Research Information Service System (RISS), Korea Med, Korean Medical Database (KM base), and Oriental Medicine Advanced Searching Integrated System (OASIS), as well as several Korean medical journals.

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## **Selection criteria**

Review criteria called for inclusion of all published and unpublished randomised controlled trials comparing acupuncture versus control acupuncture, no treatment, medication, other structured psychotherapies (cognitive-behavioural therapy, psychotherapy, or counselling), or standard care. Modes of treatment included acupuncture, electro-acupuncture, and laser acupuncture. Participants included adult men and women with depression diagnosed by Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV), Research Diagnostic Criteria (RDC), International Statistical Classification of Diseases and Related Health Problems (ICD), or Chinese Classification of Mental Disorders Third Edition Revised (CCMD-3-R). If necessary, we used trial authors' definitions of depressive disorder.

## Data collection and analysis

We performed meta-analyses using risk ratios (RRs) for dichotomous outcomes and standardised mean differences (SMDs) for continuous outcomes, with 95% confidence intervals (CIs). Primary outcomes were reduction in the severity of depression, measured by self-rating scales or by clinician-rated scales, and improvement in depression, defined as remission versus no remission. We assessed evidence quality using the GRADE method.

## **Main results**

This review is an update of previous versions and includes 64 studies (7104 participants). Most studies were at high risk of performance bias, at high or unclear risk of detection bias, and at low or unclear risk of selection bias, attrition bias, reporting bias, and other bias.

## Acupuncture versus no treatment/wait list/treatment as usual

We found low-quality evidence suggesting that acupuncture (manual and electro-) may moderately reduce the severity of depression by end of treatment (SMD -0.66, 95% CI -1.06 to -0.25, five trials, 488 participants). It is unclear whether data show differences between groups in the risk of adverse events (RR 0.89, 95% CI 0.35 to 2.24, one trial, 302 participants; low-quality evidence).

## Acupuncture versus control acupuncture (invasive, non-invasive sham controls)

Acupuncture may be associated with a small reduction in the severity of depression of 1.69 points on the Hamilton Depression Rating Scale (HAMD) by end of treatment (95% CI -3.33 to -0.05, 14 trials, 841 participants; low-quality evidence). It is unclear whether data show differences between groups in the risk of adverse events (RR 1.63, 95% CI 0.93 to 2.86, five trials, 300 participants; moderate-quality evidence).

#### Acupuncture versus medication

We found very low-quality evidence suggesting that acupuncture may confer small benefit in reducing the severity of depression by end of treatment (SMD -0.23, 95% CI -0.40 to -0.05, 31 trials, 3127 participants). Studies show substantial variation resulting from use of different classes of medications and different modes of acupuncture stimulation. Very low-quality evidence suggests lower ratings of adverse events following acupuncture compared with medication alone, as measured by the Montgomery-Asberg Depression Rating Scale (MADRS) (mean difference (MD) -4.32, 95% CI -7.41 to -1.23, three trials, 481 participants).

#### Acupuncture plus medication versus medication alone

We found very low-quality evidence suggesting that acupuncture is highly beneficial in reducing the severity of depression by end of treatment (SMD -1.15, 95% CI -1.63 to -0.66, 11 trials, 775 participants). Studies show substantial variation resulting from use of different modes of acupuncture stimulation. It is unclear whether differences in adverse events are associated with different modes of acupuncture (SMD -1.32, 95% CI -2.86 to 0.23, three trials, 200 participants; very low-quality evidence).

## Acupuncture versus psychological therapy

It is unclear whether data show differences between acupuncture and psychological therapy in the severity of depression by end of treatment (SMD -0.5, 95% CI -1.33 to 0.33, two trials, 497 participants; low-quality evidence). Low-quality evidence suggests no differences between groups in rates of adverse events (RR 0.62, 95% CI 0.29 to 1.33, one trial, 452 participants).

## **Authors' conclusions**

The reduction in severity of depression was less when acupuncture was compared with control acupuncture than when acupuncture was compared with no treatment control, although in both cases, results were rated as providing low-quality evidence. The reduction in severity of depression with acupuncture given alone or in conjunction with medication versus medication alone is uncertain owing to the very low quality of evidence. The effect of acupuncture compared with psychological therapy is unclear. The risk of adverse events with acupuncture is also unclear, as most trials did not report adverse events adequately. Few studies included follow-up periods or assessed important outcomes such as quality of life. High-quality randomised controlled trials are urgently needed to examine the clinical efficacy and acceptability of acupuncture, as well as its effectiveness, compared with acupuncture controls, medication, or psychological therapies.



## PLAIN LANGUAGE SUMMARY

#### Acupuncture for depression

#### Why is this review important?

Depression is widely experienced in our communities. People with clinical depression report lack of interest in life and activities that they otherwise normally enjoy. Some people who are depressed use complementary therapies, and some prefer these therapies over medication. Acupuncture treatment involves insertion of fine needles into different parts of the body to correct the imbalance of energy within the body.

#### Who will be interested in this review?

Adolescents and adults; healthcare practitioners, including general practitioners working with or involved in the treatment of individuals with depression; and providers and commissioners of healthcare services will be interested in this review.

#### What questions does this review aim to answer?

This review, which is an update of a previous Cochrane review (published in 2010), aims to answer the following questions.

- Is acupuncture better than no treatment or usual care?
- Is acupuncture better than control acupuncture (a treatment that looks similar to acupuncture)?
- Is acupuncture better than pharmacological therapies such as antidepressant medication?
- Is acupuncture combined with antidepressant medication better than antidepressant medication alone?
- Is acupuncture better than psychological therapies?
- Is acupuncture safer than other types of treatment for depression?

#### Which studies were included in the review?

Included were 64 randomised controlled trials (with 7104 participants) that measured changes in depression symptoms.

#### What does evidence from the review tell us?

Review authors rated the quality of evidence from most included studies as very low or low, and the effects described below should be interpreted with caution.

Acupuncture may result in a moderate reduction in the severity of depression when compared with treatment as usual/no treatment. Use of acupuncture may lead to a small reduction in the severity of depression when compared with control acupuncture. Effects of acupuncture versus medication and psychological therapy are uncertain owing to the very low quality of evidence. Risks of adverse events with acupuncture are also unclear, as most trials have not reported on adverse events.

#### What should happen next?

Review authors recommend that additional high-quality randomised controlled trials should be undertaken. These trials should use suitable blinding (by which people do not know which treatment they are receiving) when appropriate and should incorporate quality of life measures, assessment of treatment acceptability, and medium- and long-term follow-up.