



Cochrane
Library

Cochrane Database of Systematic Reviews

Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence (Review)

Mattick RP, Breen C, Kimber J, Davoli M

Mattick RP, Breen C, Kimber J, Davoli M.
Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence.
Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD002209.
DOI: [10.1002/14651858.CD002209.pub2](https://doi.org/10.1002/14651858.CD002209.pub2).

www.cochranelibrary.com

[Intervention Review]

Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence

Richard P Mattick¹, Courtney Breen¹, Jo Kimber², Marina Davoli³

¹National Drug and Alcohol Research Centre, University of New South Wales, Sydney, Australia. ²Centre for Research on Drugs and Health Behaviour, London School of Hygiene and Tropical Medicine, London, UK. ³Department of Epidemiology, ASL RM/E, Rome, Italy

Contact: Richard P Mattick, National Drug and Alcohol Research Centre, University of New South Wales, National Drug and Alcohol Research Centre, University of New South Wales, Sydney, New South Wales, 2052, Australia. R.Mattick@unsw.edu.au.

Editorial group: Cochrane Drugs and Alcohol Group.

Publication status and date: New search for studies and content updated (no change to conclusions), published in Issue 1, 2010.

Citation: Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Database of Systematic Reviews* 2009, Issue 3. Art. No.: CD002209. DOI: [10.1002/14651858.CD002209.pub2](https://doi.org/10.1002/14651858.CD002209.pub2).

Copyright © 2010 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

ABSTRACT

Background

Methadone maintenance was the first widely used opioid replacement therapy to treat heroin dependence, and it remains the best-researched treatment for this problem. Despite the widespread use of methadone in maintenance treatment for opioid dependence in many countries, it is a controversial treatment whose effectiveness has been disputed.

Objectives

To evaluate the effects of methadone maintenance treatment (MMT) compared with treatments that did not involve opioid replacement therapy (i.e., detoxification, offer of drug-free rehabilitation, placebo medication, wait-list controls) for opioid dependence.

Search methods

We searched the following databases up to Dec 2008: the Cochrane Controlled Trials Register, EMBASE, PubMed, CINAHL, Current Contents, PsycLit, CORK [www.state.vt.su/adap/cork], Alcohol and Drug Council of Australia (ADCA) [www.adca.org.au], Australian Drug Foundation (ADF-VIC) [www.adf.org.au], Centre for Education and Information on Drugs and Alcohol (CEIDA) [www.ceida.net.au], Australian Bibliographic Network (ABN), and Library of Congress databases, available NIDA monographs and the College on Problems of Drug Dependence Inc. proceedings, the reference lists of all identified studies and published reviews; authors of identified RCTs were asked about other published or unpublished relevant RCTs.

Selection criteria

All randomised controlled clinical trials of methadone maintenance therapy compared with either placebo maintenance or other non-pharmacological therapy for the treatment of opioid dependence.

Data collection and analysis

Reviewers evaluated the papers separately and independently, rating methodological quality of sequence generation, concealment of allocation and bias. Data were extracted independently for meta-analysis and double-entered.

Main results

Eleven studies met the criteria for inclusion in this review, all were randomised clinical trials, two were double-blind. There were a total number of 1969 participants. The sequence generation was inadequate in one study, adequate in five studies and unclear in the remaining studies. The allocation of concealment was adequate in three studies and unclear in the remaining studies. Methadone appeared statistically significantly more effective than non-pharmacological approaches in retaining patients in treatment and in the suppression of

heroin use as measured by self report and urine/hair analysis (6 RCTs, RR = 0.66 95% CI 0.56-0.78), but not statistically different in criminal activity (3 RCTs, RR=0.39; 95%CI: 0.12-1.25) or mortality (4 RCTs, RR=0.48; 95%CI: 0.10-2.39).

Authors' conclusions

Methadone is an effective maintenance therapy intervention for the treatment of heroin dependence as it retains patients in treatment and decreases heroin use better than treatments that do not utilise opioid replacement therapy. It does not show a statistically significant superior effect on criminal activity or mortality.

PLAIN LANGUAGE SUMMARY**Methadone maintenance therapy versus no opioid replacement therapy**

Methadone maintenance treatment can keep people who are dependent on heroin in treatment programs and reduce their use of heroin. Methadone is the most widely used replacement for heroin in medically-supported maintenance or detoxification programs. Several non-drug detoxification and rehabilitation methods are also used to try and help people withdraw from heroin. However the review found that people have withdrawn from trials when they are assigned to a drug-free program. Consequently, there are no trials comparing methadone maintenance treatment with drug-free methods other than methadone placebo trials, or comparing methadone maintenance with methadone for detoxification only. These trials show that methadone can reduce the use of heroin in dependent people, and keep them in treatment programs.