The effect of methadone maintenance treatment on alcohol consumption: a systematic review

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CRD summary
This review did not find evidence to support an increase in alcohol consumption following the initiation and maintenance of methadone treatment. Overall, the authors’ conclusions appeared to be supported by the data presented, but caution is advised due to concerns about the synthesis and the lack of a formal assessment of study validity.

Authors’ objectives
To assess changes in alcohol consumption associated with the use of methadone maintenance treatment (MMT).

Searching
MEDLINE, PsychINFO and the Cochrane database were searched. Search terms but not dates were reported. One additional landmark study was identified through unidentified means. Further details of the search strategy are available from the review authors. Only studies written in English were eligible for inclusion in the review.

Study selection
Any clinical study assessing alcohol consumption prior to, at the start of and during MMT was eligible for inclusion in the review. Studies were excluded if they focused primarily on etiological factors or the prevalence of alcohol use during MMT.

The majority of included studies were performed in the United States, with the remainder set in Europe. Study designs included both prospective and retrospective designs. Included participants varied between studies and were usually MMT patients in urban settings. Methods to measure alcohol consumption varied between studies. Most studies considered several parameters including alcohol dependence as defined by the National Council on Alcoholism’s (NCA’s) definition of alcohol dependence, the Alcohol Severity Index (ASI) score and biochemical markers. The mean length of follow-up varied from four weeks to 12 years.

One author screened all of the abstracts and ordered the full publications of potentially relevant articles for further assessment.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
One author extracted the data, which were checked by a second author. The overall effect of MMT on alcohol use and its statistical significance (where available) was reported.

Methods of synthesis
Studies were grouped according to whether they found an increase, decrease or no change in alcohol consumption during MMT. Findings were summarised qualitatively.

Results of the review
Fifteen studies (n=3,899): three were randomised controlled trials (RCTs) and the remainder comprised prospective (eight studies) or retrospective (four studies). Cohort studies were included in the review. Sample sizes varied from 40 to 625 participants.

Nine studies – three RCTs, five prospective cohort studies and one retrospective cohort study – reported no change in alcohol consumption during MMT. Three retrospective cohort studies reported an increase in alcohol consumption. Three prospective cohort studies (two of which were in the same cohort of patients) reported a decrease in alcohol
consumption.

**Authors’ conclusions**
Overall, the review did not support an increase in alcohol consumption following the initiation and maintenance of methadone treatment.

**CRD commentary**
This review answered a clear research question using broadly defined criteria, particularly for study design and population. A number of databases were searched for potential studies and further details of the strategy were available from the authors. It was unclear from the information provided in the review article whether attempts were made to locate unpublished data, so the risk of publication bias was unclear. Language bias was likely as only English language articles were eligible for inclusion. The potential for reviewer error and bias during the selection of studies was unclear, but the data extraction process was checked by a second author, which suggests the risk of bias was reduced.

No assessment of study quality was performed. This made it difficult to assess the reliability of the data, although the authors made reference to the inherent biases of some study designs and how this may affect their findings. Heterogeneity between studies hindered the interpretation of data, particularly with regard to study populations, outcome measures and length of follow-up. Given the heterogeneity between the studies a narrative synthesis was appropriate, but the simple vote-counting method used to synthesise the data may have been misleading as it failed to take into account other factors such as sample size and methodological rigour that may have affected the relative weight of evidence from each individual study.

Overall, the authors’ conclusions appeared to be supported by the data presented, but a cautious interpretation is advised given concerns about the lack of a formal assessment of study validity and the methods used to synthesis the data.

**Implications of the review for practice and research**
Practice: the authors stated that clinicians should screen all patients using methadone for alcohol dependence and provide the appropriate treatment.

Research: the authors stated that future studies were required to assess the efficacy of screening and treatment as inherent components of MMT.

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.