

[Drug Alcohol Rev.](#) 2014 Mar;33(2):115-28. doi: 10.1111/dar.12095. Epub 2013 Dec 3.

## A systematic review and meta-analysis of naltrexone implants for the treatment of opioid dependence.

[Larney S<sup>1</sup>](#), [Gowing L](#), [Mattick RP](#), [Farrell M](#), [Hall W](#), [Degenhardt L](#).

[Author information](#)

### Abstract

#### INTRODUCTION AND AIMS:

Naltrexone implants are used to treat opioid dependence, but their safety and efficacy remain poorly understood. We systematically reviewed the literature to assess the safety and efficacy of naltrexone implants for treating opioid dependence.

#### DESIGN AND METHODS:

Studies were eligible if they compared naltrexone implants with another intervention or placebo. Examined outcomes were induction to treatment, retention in treatment, opioid and non-opioid use, adverse events, non-fatal overdose and mortality. Quality of the evidence was assessed using the Grading of Recommendations Assessment, Development, and Evaluation approach. Data from randomised studies were combined using meta-analysis. Data from non-randomised studies were presented narratively.

#### RESULTS:

Five randomised trials ( $n = 576$ ) and four non-randomised studies ( $n = 8358$ ) were eligible for review. The quality of the evidence ranged from moderate to very low. Naltrexone implants were superior to placebo implants [risk ratio (RR): 0.57; 95% confidence interval (CI) 0.48, 0.68;  $k = 2$ ] and oral naltrexone (RR: 0.57; 95% CI 0.47, 0.70;  $k = 2$ ) in suppressing opioid use. No difference in opioid use was observed between naltrexone implants and methadone maintenance (standardised mean difference: -0.33; 95% CI -0.93, 0.26;  $k = 1$ ); however, this finding was based on low-quality evidence from one study.

#### DISCUSSION:

The evidence on safety and efficacy of naltrexone implants is limited in quantity and quality, and the evidence has little clinical utility in settings where effective treatments for opioid dependence are used.

#### CONCLUSION:

Better designed research is needed to establish the safety and efficacy of naltrexone implants. Until such time, their use should be limited to clinical trials. [Larney S, Gowing L, Mattick RP, Farrell M, Hall W, Degenhardt L. A systematic review and meta-analysis of naltrexone implants for the treatment of opioid dependence.

© 2013 Australasian Professional Society on Alcohol and other Drugs.