

## 14.3 Naltrexone implants prevent opiate overdose

**Findings** Opiate overdose incidents and fatalities can be eliminated during the active period of a naltrexone implant, reducing deaths among those unable to control their opiate use in any other way. Taken daily by mouth, naltrexone blocks the effects of heroin and allied drugs, deterring use and preventing overdose. But most patients quickly stop taking it and resume opiate use, leaving them highly vulnerable to overdose due to reduced tolerance. Surgically inserted naltrexone implants which can last several months promise to overcome this by automatically maintaining protective levels of the drug. The best evidence that this is indeed the case has come from a [study in Australia](#) of 361 patients implanted during rapid opiate detoxification under heavy sedation. About half had previously tried oral naltrexone which had not reduced their rates of opiate overdose. The implants were designed to block opiates for about six months. Hospital records showed that in the six months before their implant, 20 patients had been treated for opiate overdose, while in the following six months, none were. This was partly offset by a post-implant increase in incidents involving only non-opiate drugs, especially sedatives, up from eight people to 16. Most occurred within the first ten days, probably either the lingering effects of deep sedation or an attempt to self-medicate withdrawal symptoms. After six months the initial implant would no longer be active, but in the following six months just three people were treated for opiate overdose, while sedative overdoses returned to their pre-implant level. By definition, none of the pre-implant overdoses were fatal, but this was also the case after the implants.

**In context** There are no randomised trials comparing naltrexone implants to other treatments. Results from studies to date cannot securely be attributed to the implants and may partly be due to the type of patients who select or are selected for treatment; in some studies, patients have been relatively socially integrated and problem-free. However, there is now appreciable experience across several countries suggesting that implants can help selected patients stay opioid-free more effectively than detoxification alone or detoxification followed by oral medication. Most importantly, while active and even afterwards, they have not yet been associated with the very high opiate overdose and death rates seen with oral naltrexone. However, deaths have occurred from other causes and other drugs, or from opiates after the implant has run out. A few patients develop complications at the insertion site which require treatment or removal, but no serious adverse incidents have been recorded.

**Practice implications** Naltrexone implants are not a licensed medical product. However, doctors in Britain can prescribe and administer them to private patients and to NHS patients if funded by the local health service. In these cases, the practitioner takes on an extra responsibility for assuring safety and benefit sufficient to outweigh any risks.

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The main unresolved issue is the type of patient for whom this option is suitable and safe. The clearest candidates are those motivated to return to a life without opiate-type drugs (including prescribed substitutes) and who have the resources, stability and support to sustain this, but who when free to experience heroin, cannot stop using. For these cases, implants are cheaper and more convenient than residential care. Implants may also be considered for unstable patients at very high risk of overdose, but who will not accept or do not do well in high-dose methadone programmes. The risk is that some may find life intolerable without opiates, leading to desperate measures (such as self-removal of the implant) or dangerous diversification to non-opiate drugs. These are also the patients who seem most likely to resume heroin use after the implant has run out. Close supervision in the initial stages is essential to pick up on such risks, and the period of abstinence 'bought' by the implant must be used to construct a life sustainable without risky drug use.

**Featured studies** Hulse G.K. *et al.* "[Reducing hospital presentations for opioid overdose in patients treated with sustained release naltrexone implants.](#)" *Drug and Alcohol Dependence*: 2005, 79(3), p. 351–357 [DS](#)

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