

12.2 Anti-alcohol drug also reduces cocaine use

Findings Trials comparing disulfiram to placebo have found that the anti-alcohol drug also helps in the treatment of cocaine dependence.

In the [featured study](#) 121 patients seeking treatment for cocaine dependence at a US outpatient centre were randomly allocated to 12 weeks daily disulfiram or to identical placebo capsules. Due to the aversive interaction between disulfiram and alcohol, all were cautioned not to drink. Capsules were dispensed weekly when patients attended for therapy.

Of the 121 patients, 112 started treatment and 53 completed it. Nearly three-quarters of the non-starters or drop-outs were recontacted at the end of treatment and included in the analysis. For the sample as a whole and for those who started, engaged with, or completed treatment, disulfiram led to significantly greater reductions in the frequency of cocaine use than placebo. The effect remained significant among patients (the majority) who did not drink during the 12 weeks, suggesting that disulfiram directly reduced cocaine use. But the strong relationship between alcohol and cocaine use was consistent with previous work showing that disulfiram also indirectly curbs cocaine use by deterring drinking. However, being assigned to disulfiram did not help some patients – those most severely dependent on alcohol. Presumably in order to resume drinking, they tended to stop taking disulfiram and then to drink and also to use cocaine. No attempt was made to improve their compliance by supervising consumption of the capsules.

In context There is no recognised drug treatment for cocaine dependence and only disulfiram has a consistently positive research record. However, clinical experience is limited and just a handful of studies have been conducted, most at a single treatment centre by the same research team.

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In an earlier study, cocaine users knew whether they were taking disulfiram so (as in normal practice) the outcomes reflected any direct effect on cocaine use plus its deterrent effect on drinking. Compared to the control group, many more disulfiram patients avoided drinking, strongly linked to the fact that 20–30% more also abstained from cocaine for at least three weeks. Over the following year the effect faded but still patients who had not drunk alcohol during treatment remained more likely to sustain this and also more likely to abstain from cocaine. In this and in the featured study, few patients refused to take part on the grounds they did not want to take disulfiram.

The same centre has tested disulfiram on cocaine-using methadone patients and on opiate/cocaine dependent patients starting buprenorphine treatment [▶ Links](#). In both cases, the drug led to greater reductions in cocaine use than a placebo and virtually eliminated drinking. Relative to the costs of methadone treatment itself, mixing disulfiram with methadone was an inexpensive way to reduce cocaine use.

Practice implications Heavy drinking and cocaine use are commonly intertwined. Disulfiram can help secure a period of abstinence during which these patients can develop new behaviour patterns. Those who see cocaine as their main drug find disulfiram more acceptable than primary drinkers. Nevertheless, committed drinkers will tend to discontinue disulfiram and resume drinking and cocaine use. Experience suggests that drop-out will be minimised if clinical or family supervision of consumption can be organised. Disulfiram should also be considered for cocaine dependent patients who do not drink and can easily and cheaply be added to maintenance regimes for opiate-addicted patients who find it hard to curb their cocaine use. Supervised consumption arranged for methadone can at the same time ensure that disulfiram is taken. If successful, this will also eliminate drinking, a prominent risk factor in opiate overdose.

Some extra costs, medical contraindications, possible risky interactions with cocaine and alcohol, and side effects, may limit disulfiram's applicability to patients in greatest need of reducing their alcohol and/or cocaine use and who are resistant to non-drug therapies.

Featured studies Carroll K.M. *et al.* "Efficacy of disulfiram and cognitive behavior therapy in cocaine-dependent outpatients. A randomized placebo-controlled trial." *Archives of General Psychiatry*. 2004, 61, p. 264–272. [DS](#)

Additional reading Witton J. *et al.* *Treating crack cocaine dependence*. National Treatment Agency, 2002. Copies: www.nta.nhs.uk.

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