

A better way to help high-risk pregnant smokers

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Cigarette smoking among drug dependent pregnant women is alarmingly high, estimated at 77 to 99%. Programs that treat pregnant patients for substance use disorders often fail to address cigarette smoking despite the clear risks to both mother and child, including ectopic pregnancy, spontaneous abortion, preterm delivery, low birth weight, and Sudden Infant Death Syndrome. However, programs to help people quit smoking do not seem to interfere with drug abuse treatment, and may actually improve drug abstinence rates.

One of the most effective methods of helping people to quit smoking is contingency management, which gives smokers monetary incentives for meeting target goals. Researchers at Johns Hopkins University's Center for Addiction and Pregnancy recently used contingency management to shape smoking reduction and abstinence in drug-dependent pregnant women, with promising results.

One hundred and three [pregnant smokers](#) who were prescribed methadone maintenance for heroin dependence were enrolled in a study comparing three conditions. A third of the women were enrolled in a contingency management shaping program and received escalating monetary incentives for reducing their level of cigarette smoking or by being abstinent as measured by breath carbon monoxide levels. The smoking reduction targets required for [monetary incentives](#) increased over time from minimal reduction in the early phases of treatment to the requirement of total abstinence by week 12. A relapse meant no monetary incentive was earned and the participant returned to the lowest

level of payment. A third of the women could earn incentives for reduced smoking according to a schedule of payments not connected to the woman's own smoking behaviour (non-contingent incentives). The final group of women received information about the risks of [smoking during pregnancy](#) but received no money for reduced smoking.

All of the groups showed some reduction in smoking levels during the experiment, but the women in the contingency management group greatly outperformed the two other groups. Nearly half of the contingency management women met the target of 75% reduction at least once, and a third of them met criteria for smoking abstinence (100% reduction) at least once by week 12. In contrast, none of the other condition participants met the abstinence criteria and only 2% of participants met the 75% reduction target during the study period.

The benefits of contingency management carried on after the experiment. The women in the contingent group had fewer pre-term births (17%, compared with 25% and 29% in the other two groups) and fewer babies with [low birth weight](#) (20%, compared with 38% and 43%), and they reported less smoking in the weeks after birth.

The results of the study indicate that contingency management programs are an effective way to reduce smoking in the hard-to-treat population of drug-dependent pregnant women.

More information: Tuten M., Fitzsimons H., Chisolm M.S., Nuzzo P.A., and Jones H.E. Contingent incentives reduce cigarette smoking among pregnant, methadone maintained women: Results of an initial feasibility and efficacy randomized clinical trial. *Addiction*, 107. [doi: 10.1111/j.1360-0443.2012.03923.x](https://doi.org/10.1111/j.1360-0443.2012.03923.x)

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