

## Drug may help women stop smoking

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Adding the opiate blocker naltrexone to the combination of behavioral therapy and nicotine patches boosted smoking cessation rates for women by almost 50 percent when assessed after eight weeks of treatment, but made no difference for men, report researchers from the University of Chicago in the October 2006 issue of the journal *Nicotine and Tobacco Research*.

Naltrexone helped reduce the craving for cigarettes and lessened the discomforts of withdrawal for women in the study. It also reduced the weight gain often experienced by men and women in the first month after quitting.

"Women have historically had less success than men in giving up cigarettes," said study author Andrea King, Ph.D., associate professor of psychiatry at the University of Chicago. "In this small study, naltrexone seems to have closed that gap."

The researchers studied 110 nicotine-dependent smokers who wanted to quit. The participants, on average, had smoked about a pack a day for 25 years and had already tried to stop multiple times.

All volunteers received standard comprehensive smoking cessation treatment, including one-hour behavioral counseling sessions once a week, beginning two weeks before their quit date and lasting until four weeks after, and nicotine patches for the first month after quitting.

Half of the participants also received 50 milligrams per day of oral

naltrexone, beginning three days prior to the quit date and continuing for eight weeks afterwards. The other half received identical pills that contained no medication. Neither the patients nor the researchers knew who received the drug.

Because naltrexone works by blocking some of the effects of narcotics, such as morphine, it was originally used to treat heroin addicts. It also helps reduce relapse rates in alcoholics. Scientists suspect that it inhibits the chemical signals within the brain that convey pleasure when people use drugs such as alcohol or nicotine. When the immediate rewards of drinking or smoking are blocked, people report reduced craving for alcohol or cigarettes.

In this study, success was defined as "not smoking (even one puff) daily for one week and not smoking even a puff at least one day in each of two consecutive weeks at any point in the trial." A more stringent criterion of prolonged abstinence, not smoking even one puff after the first week of quitting, was also used and showed similar results.

Fifty-two research subjects received naltrexone. In this group, after eight weeks of treatment, men and women had comparable success rates: 62 percent of men and 58 percent of women. In contrast, among the 58 research subjects who did not receive naltrexone, success remained high in men with 67 percent quitting smoking, but was significantly lower in women, with only 39 percent quitting. So, while the women on placebo had lower quit rates than men, the women taking naltrexone had quit rates similar to men.

Previous studies have found that nicotine replacement may be less effective in suppressing withdrawal symptoms in women, but the combination of the nicotine patch and naltrexone appears to restore the balance. Naltrexone helped women, but not men, get over the effects of tobacco withdrawal more quickly. Craving for cigarettes decreased over

time for men and women, but it decreased faster for women taking naltrexone.

Naltrexone also prevented the weight gain that commonly comes with giving up smoking. Those who did not get the drug gained about four pounds in the first month after quitting. Those who took the drug gained only one pound. A similar study from researchers at Yale University, published earlier this year, also found that naltrexone prevented cessation-related weight gain.

Although the drug reduced weight gain for participants of both sexes, "this issue may be more salient for women," the authors note. "It follows," they suggest, "that women may preferentially respond to a medication that reduces cessation-related weight gain."

When assessed six months after treatment, however, only about one-third of the participants in this study had quit for good. "We genuinely need better ways to help people stop smoking," King said. Smoking is the number one preventable cause of death and disease in the United States, and quit rates have improved, "but we still have a long way to go."

"This preliminary study indicates that naltrexone may be beneficial as an adjunct to comprehensive smoking cessation treatment, particularly for female smokers," the authors conclude.

Source: University of Chicago

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