



Conquering Cravings

A wave of new drugs targeting addiction offers hope to people battling the habit

By Katherine Hobson

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By 2003, Brenda Moore was desperate to keep her promise. A smoker since age 16, she had vowed to her daughter two years earlier that she would quit; now, several failed tries later, young Tiffany had developed asthma. Then a Sunday newspaper ad caught Moore's eye, a call for volunteers to take part in the clinical trial of a new antismoking drug. For three months, Moore, now 40, took a pill daily and made regular trips from her home in Beattyville, Ky., to Lexington to be monitored. This time, things were different. "In the first two weeks I was taking the drug, I started to look at the cigarette differently," she says. "It literally took on a new nastiness."

Laurie O'Connor, 49, was also a victim of her cravings—for alcohol. "I needed a drink. I needed that pleasure I got from drinking," says O'Connor, of Wake Forest, N.C. She, too, tried to stop cold turkey and failed. And she, too, joined the trial of a new drug, in 2002. Before long, she says, "the physical urge was totally, totally gone."

No quick fix. Today, Moore and O'Connor are still addiction free, and the drugs they tested—Moore's was Chantix; O'Connor's, Vivitrol—have just hit the market. The medications are two of a growing number of drug treatments approved or under study to battle smoking and heavy drinking. Neither provides a quick fix (and both are intended to be taken in concert with counseling), but physicians hope the drugs will work for people who haven't been able to tame their cravings using other methods. The stakes are high: Tobacco is the world's leading cause of preventable death, responsible for about 435,000 deaths a year in the United States alone. Alcohol abuse afflicts about 8 million American adults and carries with it a host of potentially deadly hazards, including liver damage and a heightened risk of cancer.

Tackling these addictions with drugs isn't new. Some smokers are able to give up the habit by replacing cigarettes with a tapering dose of nicotine delivered by nasal spray, gum, or a patch; others gain the necessary willpower from bupropion (brand name Wellbutrin or Zyban), better known as an antidepressant. Medications that fight drinking include naltrexone and acamprosate, both of which tamp down cravings, and disulfiram (otherwise known as Antabuse), which makes you physically ill if you consume alcohol.

While the various treatments do help some people, none come close to being a silver bullet—which is why doctors are excited to be given new weapons.

Chantix, the brand name for the drug varenicline, is believed to block a brain receptor for nicotine, so you don't get that old pleasurable buzz from smoking. At the same time, the drug itself appears to interact with the receptor-blunting cravings and withdrawal symptoms. That one-two punch, researchers say, helps keep the occasional slip from turning into a full-blown relapse. "I didn't have an urge to smoke. Before, it was the only thing on my mind," marvels Robert Allan, 49, of Norwood, Mass. He'd tried to beat the habit many times before succeeding with Chantix—using the patch, hypnosis, and the just-do-it approach—and, many times, smoking had won. Overall, about 22 percent of people on Chantix were able to truly stop smoking for the long haul, roughly the same percentage as those who succeed using nicotine (though many of those people keep needing nicotine). And Chantix helped a greater proportion than bupropion seems to. Nausea was the most common side effect of the new drug.

Vivitrol is actually a reformulation of naltrexone, taken as a once-a-month injection rather than as a daily pill. That's a big improvement, say addiction experts. With a daily regimen, the many people who are ambivalent about giving up alcohol often neglect to take the medicine. Vivitrol, which stays at a constant level in the blood for a month, "is the first treatment of any sort for any type of addiction that addresses noncompliance in a meaningful way," says Michael Bohn, a psychiatrist specializing in addiction at Aurora Psychiatric Hospital in Wauwatosa, Wis. Bohn was an investigator in the Vivitrol study and is on the joint advisory board of the two companies that developed it.

People taking Vivitrol reported 25 percent fewer days of heavy drinking—defined as four drinks for women and five for men—than those on a placebo treatment. (A differently focused study of the old daily dose found that people on naltrexone were abstinent 81 percent of the time, a 6-point lead over people taking dummy pills.) Nausea and irritation at the injection site were the most common side effects. Both Chantix and Vivitrol were administered over 12 to 26 weeks, though patients may end up taking them longer. Some Vivitrol patients have been on the drug for four years, while those who succeed after 12 weeks on Chantix are encouraged to take it for another 12 weeks, for good measure.

Next up. Behind the new arrivals lies a field of comers still in development. NicVax, for example, is a vaccine that would activate the immune system to respond to nicotine as a foreign invader, blocking it from reaching the brain. Rimonabant, approved in Europe to tame the desire to overeat, may also help people quit smoking. Topiramate, for seizures, is being studied for tobacco and alcohol addiction as well as compulsive eating. It "calms" the brain by helping to regulate neurotransmitters thought to be involved in addiction. The alcohol medication naltrexone, used in its original pill form along with counseling and nicotine patches, boosted female smokers' success rates (but not males' rates) by almost 50 percent, says a study in the October issue of *Nicotine and Tobacco Research*.

Applying one drug to different addictions makes sense, since the same pleasure centers and pathways in the brain are activated by many different substances and behaviors. Indeed, it's believed that the drives to eat in obese people and to take drugs in addicts spring from similar brain circuits. Some of these medications are now being studied for compulsive gambling.

But researchers caution that no drug will painlessly transform an addict into an abstainer, because addiction isn't purely a physical disease. "Addiction, whether it's to alcohol or nicotine or heroin, is really a complex disorder," says **Roger Weiss, clinical director of the alcohol and drug abuse treatment program at McLean Hospital** in Belmont, Mass. "There's a biological component, a psychological component, a social component. They all come into play." That's why counseling is so important; cognitive behavior therapy, for example, may allow addicts to form new, healthier habits by helping them recognize what situations or patterns of thinking trigger an urge to use alcohol or drugs.

Talk, too. A number of studies have shown that therapy raises success rates; in July, a National Institutes of Health panel found that telephone hot lines and counseling were effective in helping smokers; adding counseling to drugs increases the odds of quitting. "The current thinking is that the medications act on the part of the brain that deals with drives and motivations," says Bohn. "And psychological help increases activity in the prefrontal cortex," which deals with reasoning.

For O'Connor, Vivitrol blunted the physical urge to drink while counseling gave her insights on-and thus more control over-the psychological ones. "I was drinking to cope and to numb myself to the stressors in my life," she says. Counseling taught her to manage stress by cultivating other pleasures-like walking the dog or making plans with friends.

Next, investigators hope to figure out which people respond to which treatment-and why. Those with a certain genetic subtype of opiate receptor, for example, tend to get better results with naltrexone than other heavy drinkers, says Bohn. A personalized prescription for addiction treatment is still a long way off; for now, choosing the right drug is a matter of trial and error. Moore is thankful to be among those who have finally found their cure. "I used to get up, put on coffee, and have a cigarette while it was being made," she says. "But I started to go outside and walk around and look at my flower beds instead." Now, that's her new habit.