Drugs, gums or patches won't increase your chances of quitting

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Credit: AI-generated image (disclaimer)

Using prescription drugs or over-the-counter products like gums, mints or patches won't increase your chances of quitting smoking a year later, according to a new study.

The US researchers followed two groups of people 2002/03 and 2010/11

and found at the end of the 12-month period, those using varenicline (sold in Australia as Champix), bupropion (Zyban), or nicotine-replacement therapy (gums, mints or patches) were no more likely to have quit smoking for 30 days or more than those who didn't use these drugs.

Evidence based smoking cessation?

We're told the best way to quit smoking is to use an "evidence-based" method: a strategy supported by high-quality research evidence. And for the last 30 or so years, this has been nicotine-replacement therapy, bupropion (Zyban) and varenicline (Champix), which claim to increase (and sometimes double) your chance of success.

In the hierarchy of evidence, the lowest form is anecdote or case studies ("I smoked for 20 years, then an alternative therapist sprinkled magic powder on me, and the next day I stopped smoking!"). These cannot withstand the most elementary critical appraisal, starting with the basic question of how many similar smokers sprinkled with the powder kept smoking and how many who went nowhere it also stopped smoking.

Far higher up the evidence pyramid is the double-blinded, randomised controlled trial (RCTs). In these, both the person taking the treatment and those delivering it are unware of who is taking the active drug and who is taking the comparison placebo or comparison drug. All enrolled in RCTs are randomly allocated to the active or placebo/comparison groups. The numbers of participants are sufficiently large enough to allow for an outcome to be declared statistically significant (or not) above a chance finding.

Some have tried to dismiss earlier findings about the poor performance of nicotine-replacement therapy by emphasising "indication bias". In the real world, those who opt to use medications to try to quit are likely to be

more intractable smokers, more highly addicted to nicotine, and with histories of failure at quitting unaided. No one should therefore be surprised if they fail more often than those who try to quit on their own.

In this new study, this issue was anticipated and all smokers were assessed by what the study authors called a "propensity to quit" score. This score accounts for factors such as smoking intensity, nicotine dependence, their quitting history, self-efficacy to quit, and whether they lived in a smoke-free home where quitting would likely be more supported.

In the analysis, those who tried to quit with drugs and those who didn't were matched on this propensity score, so "like with like" could be compared in the analysis. The findings held even when these "propensity" to quit factors were taken into account.

RCTs are very different to real world use

Critics have long pointed out that RCTs have many features which make them a pale shadow of how drugs are used in the real world.

RCTs often exclude people with mental illness, poor English, and no fixed address. Excluding hard-to-reach and treat participants is likely to produce more flattering results.

In the real world, people are not paid or otherwise incentivised to keep taking the drugs across the full period of the trial, so compliance is almost always far lower.

In the real world, people do not get reminder calls, texts or visits from researchers highly motivated to minimise trial drop-out. There is no "Hawthorne effect": when trial involvement and the attention paid to participants alters the outcomes.

Nicotine-addicted people generally know very quickly if they have been allocated to the placebo arm in NRT trials because their brains feel deprived of nicotine. They invariably experience unpleasant symptoms. Knowing they have been allocated to the placebo undermines the integrity of the trial because it is important participants believe the drug might be effective.

Large, real world studies like the one just published, which assess long-term success, not just end-of-treatment or short-term results, are therefore of most importance in assessing effectiveness. These new data ought to cause such rhetoric to cool right down.

As for the evidence on e-cigarettes in quitting, neither the US Preventive Health Services Task Force, nor the UK's National Institute for Health and Care Excellence or Australia's National Health and Medical Research Council, have endorsed e-cigarettes as an effective way of quitting smoking.

Quitting smoking is the single most important thing anyone can do to reduce the likelihood they will get heart or lung disease, and a whole string of cancers.

It has been in the clear interests of the pharmaceutical and, more recently, the vaping (e-cigarette) industries, to promote the notion that anyone who tries to quit alone is the equivalent of someone with pneumonia refusing antibiotics. Hundreds of millions around the world have quit smoking without using any pharmaceutical intervention.

Before nicotine-replacement therapies became available in the 1980s, many millions of smokers successfully quit smoking without using any drug or nicotine substitute. The same still happens today: most ex-smokers quit by going cold turkey.

The problem is, in recent years, the government has moth-balled the national quit campaign, the megaphone for promoting this very positive message. Commercial interests are now commodifying something millions have always done for themselves.

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