

Nicotine replacement: when quitting cigarettes, consider using more nicotine, not less

19 April 2019, by Jamie Hartmann-Boyce



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When delivered through cigarettes, nicotine is considered to be one of the most addictive substances on Earth, so it may seem odd to suggest that people should use more, rather than less, to quit smoking. A [recent review of the research](#), however, has found just that.

Nicotine replacement therapy, known as NRT, has been used to help people [safely quit smoking](#) for more than 20 years. It can be prescribed by a doctor but, in many countries, is also available to buy from grocery stores and pharmacies. The [Cochrane review](#) (Cochrane assesses evidence on healthcare interventions and summarises the findings) looked at the best ways to use NRT to quit [smoking](#) – and found three ways in which using more nicotine might help:

- **Use two forms of NRT rather than one.** NRT is available in a range of forms: skin patches, chewing gum, nasal and oral sprays, inhalators, and lozenges. There is

high quality evidence that sticking on a patch while also using another form of NRT, such as gum, increases your chances of quitting.

- **Start to use NRT before stopping smoking.** Usually people start using NRT on the day they quit. But starting to use NRT a few weeks before, while they're still smoking, may help more people to quit successfully.
- **Higher doses of NRT may help some people.** Some NRT releases higher levels of nicotine than others. In the studies reviewed, people were more likely to quit if they used 4mg compared to 2mg nicotine gum. The higher dose may be particularly helpful for people who smoke more cigarettes – for example, over 20 a day. Evidence also suggests that using 21mg or 25mg patches might increase the chance of quitting compared to using 14mg or 15mg patches.

But why?

There are several good reasons why using nicotine in this way can be the solution, rather than the problem.

First, it can make cigarettes less enjoyable. Smokers find smoking pleasurable because [nicotine from cigarettes makes the brain release dopamine](#) – a "happy" hormone. The [brain](#) gets used to this, so when a smoker hasn't smoked for a while, they start to experience [unpleasant symptoms](#), such as cravings, sleep problems and mood changes.

NRT provides the brain with an alternative source of nicotine, which eases these symptoms. When [NRT is used before quitting](#), brain receptors are already filled with nicotine when a cigarette is

smoked. Therefore, the smoker doesn't get the usual burst of pleasure from smoking, helping to break the association between smoking and feeling good.

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Second, NRT replaces a harmful way of delivering nicotine with a safe alternative. Some people may worry that taking more nicotine will cause side effects. Fortunately, [NRT is considered safe](#), and this review didn't find any evidence of overdosing on NRT if used as directed.

Smoking is dangerous because of the [many harmful chemicals](#) present in [cigarette smoke](#), including arsenic and formaldehyde. None of these are present in NRT.

Finally, NRT is not as addictive as smoking. Some people are concerned about becoming addicted to NRT. But the way cigarettes deliver nicotine makes them far more addictive than NRT. Cigarettes deliver nicotine to the brain extremely quickly, and do so alongside other chemicals, which increase the force with which nicotine affects the brain. Because nicotine from NRT is delivered to the brain much more slowly, and without those extra chemicals, smokers do not experience the same quick hit of pleasure when they use NRT. This makes NRT less addictive.

Quitting smoking is hard, but important – even people who've smoked for many years can improve their health by quitting. The problem with nicotine is that it gets people addicted to smoking, but cigarettes – not nicotine – are the killer.

In 1976, eminent professor, Mike Russell, wrote "[People smoke for nicotine but they die from the tar](#)". This is as true today as ever, and evidence shows that more [nicotine](#) can be part of the answer.

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