**Best Practice Message**

**May 2025**

# **Nicotine Replacement Therapy (NRT)**

## ***Practice changing moments***

* NRT is an effective strategy for reducing smoking.
* There are no long-term studies on the use of NRT.
* Patients who are using NRT for long periods of time or excessive quantities may require review and assessment of their intention to quit.
* Varenicline (Champix) offers similar efficacy to combination NRT treatment.

## **Background**

Smoking is a significant cause of health inequities. Rates of smoking are higher among Māori (29%) and Pacific peoples (18%) compared to the overall rate of 12% in Aotearoa. Around 4,500 people die every year in Aotearoa due to smoking.¹

Nicotine Replacement Therapy (NRT) is a strategy that aims to reduce withdrawal symptoms for those wishing to permanently or temporarily quit or reduce smoking. NRT increases the chances of stopping smoking by 50–70%.³ People should use NRT for at least eight weeks. Those who need NRT for longer than 12 weeks can continue to use it.

In recent years, the use of NRT has increased. It is an effective harm minimisation strategy contributing to the record decline in smoking rates. ² However, there are some concerns about patients using NRT over very long periods of time. There are no studies on very long-term use of NRT, and isolated reports suggest that some patients seek excessive amounts of NRT. This raises concerns about the potential for NRT products to be used for intentional harm and speculation that NRT is being diverted to inmates in prisons.⁴

## **NRT funding**

There are several different NRT formulations available over the counter in New Zealand: patches, gum, lozenges, and mouth spray. The patches, gum, and lozenges are subsidised if supplied on prescription, via the Quit Card programme, or by community pharmacists (without a prescription).⁵ NRT products are also available for free from stop-smoking services. It is therefore possible that patients may be receiving NRT products from multiple providers.

NRT is listed on the Pharmac schedule as a “treatment for substance dependence.” The only funding restriction on nicotine products is that they will not be funded for amounts of less than four weeks of treatment. Pharmac does not restrict NRT to cigarette smoking cessation; however, it is only licensed as an aid in smoking cessation, reduction, or temporary abstinence—that is, the licence does not cover vape use.³

## **NRT cautions and risks**

The use of NRT in an individual already accustomed to nicotine introduces few new risks. The risk of continued smoking outweighs any risks of using nicotine preparations.3 Potential risks and considerations include:

* **Dependency:** A UK study found more than 20% of NRT users used it for longer than the standard 12 weeks. 8% of patients still used NRT (including e-cigarettes) after 12 months.6
* **Adverse effects:** Patches can cause skin irritation. Gastointestinal disturbances are common with gum or lozenges.3
* **Cardiovascular concerns:** NRT is associated with increased risk of insulin resistance, metabolic abnormalities associated with the insulin resistance syndrome, and poses potential cardiovascular risks.7
* **Cancer risk:** There is a conceptual increased cancer risk of NRT vs abstinence, however very long-term studies of NRT effects do not yet exist and there is no human data to corroborate this risk.8
* **Risk of toxicity and death:** Nicotine is a toxic and addictive drug which can be potentially fatal. Adult smokers can tolerate doses of up to 40-60mg9 - an average cigarette yields about 2mg of absorbed nicotine.10 However even small quantities of nicotine can be dangerous in children. Patients should be warned to keep NRT out of reach of children. Nicotine naive adults are also at risk.
* **Medication interactions:** There are no drug interactions with NRT. However, because of the effects of tobacco smoke on liver metabolism, the doses of some medicines (for example, some psychiatric medicines such as olanzapine and clozapine and insulin) may need to be reduced when people stop smoking.

## **NRT in Hawke’s Bay**

In Hawke’s Bay, there has been an increase in lozenge and gum NRT prescriptions dispensed over the last few years, with a noticeable rise in 2 mg gum. However, patch NRT product prescriptions have remained relatively stable.

## **Stopping NRT**

Patients on NRT who have ceased smoking should continue using NRT for 2 weeks before having the dose reassessed.11 There is no evidence that tapering off NRT is more effective than abruptly stopping.12,13 The conversation to stop NRT should include:

* Discuss motivation and readiness to stop NRT.
* Identify any potential barriers or concerns.
* Set a target quit date for NRT.
* Choose a gradual reduction method if applicable.
* Provide behavioural support and counselling, this may include support from health coaches or Quitline.
* Consider close controlled dispensing of NRT.
* Consider other pharmacological options for cessation.

Patient will likely be on a combination of NRT; patches, gum and/or lozenges. Consider stopping patches and gradually reducing lozenges or gum or stepping down patches while maintaining lozenges or gum.

Nicotine patches

Patches are a prolonged release formulation, releasing 7, 14 or 21 mg of nicotine over 24 hours. An approach to weaning down patches means a 7 mg reduction at agreed upon intervals, as nicotine patches cannot be cut. The datasheet recommends three to four weeks between stepping down patches.14

Nicotine lozenges

Lozenges are available in 1 mg and 2 mg. The lozenge datasheet recommends, gradually reducing to one to two lozenges a day and then stopping completely. This may take 3 months.14

Nicotine gum

Gum is available in 2mg and 4mg. Strategies for reducing over weeks or months include:

* The number of gum pieces is reduced gradually per day until only one to two pieces of gum per day are required, at which time use of the gum could be further divided into small pieces or stopped.9
* Chewing time is decreased.
* Nicotine gum is replaced with sugar-free gum thereby stopping it completely.15

Varenicline

Varenicline (Champix®) is a selective nicotine-receptor partial agonist. Champix is now available in New Zealand again and funded via special authority. It is not funded when co-prescribed with NRT. Patient may benefit from stopping NRT and starting a 12-week course of Champix. See [NZF](https://nzf.org.nz/nzf_2856) for more information.

Nortriptyline and bupropion are other pharmacological options for nicotine dependence. More information is available on [NZF](https://nzf.org.nz/nzf_2838).

**Tools:**

* HealthPathways: [Nicotine Replacement Therapy (NRT)](https://hawkesbay.communityhealthpathways.org/21778.htm)
* HealthPathways: [Smoking Cessation Advice](https://hawkesbay.communityhealthpathways.org/16604.htm)
* Ministry of Health NZ: [Guide to Prescribing Nicotine Replacement Therapy (NRT)](https://www.health.govt.nz/system/files/2014-06/guide-to-prescribing-nicotine-replacement-therapy-2021.pdf)
* Ministry of Health NZ: [New Zealand Guidelines for Helping People to Stop Smoking 2021 Update](https://www.health.govt.nz/system/files/2014-06/the-new-zealand-guidelines-for-helping-people-to-stop-smoking-2021.pdf)
* Smokefree.org.nz: [Find a stop smoking service](https://www.smokefree.org.nz/quit/help-and-support/find-a-stop-smoking-service)

**Patient resources:**

* Healthify: [Quit smoking topics](https://healthify.nz/hauora-wellbeing/s/smoking-topics)

**References:**

1. the-new-zealand-guidelines-for-helping-people-to-stop-smoking-2021.docx [Internet]. [cited 2024 Sep 2]. Available from: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.health.govt.nz%2Fsystem%2Ffiles%2F2014-06%2Fthe-new-zealand-guidelines-for-helping-people-to-stop-smoking-2021.docx&wdOrigin=BROWSELINK

2. A Smokefree 2025 Plan [Internet]. ASH NZ. [cited 2025 Apr 28]. Available from: https://www.ash.org.nz/smokefree\_2025\_plan

3. Nicotine replacement therapy (NRT) - New Zealand Formulary [Internet]. [cited 2024 Aug 21]. Available from: https://nzf.org.nz/nzf\_2844?searchterm=nrt

4. Calls for monitoring due to reports of Habitrol fuelling prison violence | Pharmacy Today [Internet]. [cited 2025 Apr 28]. Available from: https://www.pharmacytoday.co.nz/article/news/calls-monitoring-due-reports-habitrol-fuelling-prison-violence

5. Government P| TPW| N. Pharmacist provision of subsidised Nicotine Replacement Therapy and the Emergency Contraceptive Pill [Internet]. Pharmac | Te Pātaka Whaioranga | NZ Government. 2017 [cited 2024 Aug 21]. Available from: https://pharmac.govt.nz/news-and-resources/consultations-and-decisions/pharmacist-provision-of-subsidised-nicotine-replacement-therapy-and-the-emergency-contraceptive-pill

6. Shahab L, Dobbie F, Hiscock R, McNeill A, Bauld L. Prevalence and Impact of Long-term Use of Nicotine Replacement Therapy in UK Stop-Smoking Services: Findings From the ELONS Study. Nicotine & Tobacco Research. 2016 Sep 24;20(1):81.

7. Eliasson B, Taskinen MR, Smith U. Long-term Use of Nicotine Gum Is Associated With Hyperinsulinemia and Insulin Resistance. Circulation. 1996 Sep;94(5):878–81.

8. Shields PG. Long-term Nicotine Replacement Therapy: Cancer Risk in Context. Cancer Prevention Research. 2011 Nov 2;4(11):1719–23.

9. Habitrol chewing gum datasheet [Internet]. Haleon New Zealand; 2008. Available from: https://www.medsafe.govt.nz/profs/datasheet/h/habitrolgum.pdf

10. Mayer B. How much nicotine kills a human? Tracing back the generally accepted lethal dose to dubious self-experiments in the nineteenth century. Arch Toxicol. 2014;88(1):5–7.

11. Queensland Govermant. Smoking cessation clinical pathway [Internet]. State of Queensland (Queensland Health); 2021. Available from: https://www.health.qld.gov.au/\_\_data/assets/pdf\_file/0031/435469/smoking-pathway.pdf

12. Theodoulou A, Chepkin SC, Ye W, Fanshawe TR, Bullen C, Hartmann-Boyce J, et al. Different doses, durations and modes of delivery of nicotine replacement therapy for smoking cessation. Cochrane Database of Systematic Reviews [Internet]. 2023 [cited 2025 Apr 1];2023(6). Available from: https://www.readcube.com/articles/10.1002%2F14651858.cd013308.pub2

13. RACGP - Supporting smoking cessation: A guide for health professionals [Internet]. [cited 2025 Apr 1]. Available from: https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/supporting-smoking-cessation

14. Habitrol lozenge datasheet [Internet]. Haleon New Zealand; 2008. Available from: https://www.medsafe.govt.nz/profs/datasheet/h/Habitrollozenge.pdf

15. Devi RE, Barman D, Sinha S, Hazarika SJ, Das S. Nicotine replacement therapy: A friend or foe. Journal of Family Medicine and Primary Care. 2020 Jun 30;9(6):2615.

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