



Nicotine Replacement Therapy (NRT).

Information
for smokers

The logo for Quitline, featuring a blue circular icon with a white checkmark and a red flame-like shape at the bottom left, followed by the text "Quitline" and the phone number "13 7848".

Quitline
13 7848

What is NRT?

The aim of **Nicotine Replacement Therapy (NRT)** is to reduce the withdrawal symptoms associated with nicotine addiction by replacing some of the nicotine obtained from cigarettes. The nicotine is referred to as 'clean' or 'therapeutic' nicotine, as it is not associated with the harmful constituents found in tobacco smoke. Treating nicotine addiction with NRT enables people who smoke to focus on the two other aspects of smoking—the habits or behaviours associated with smoking and the emotional aspects, such as stress and boredom.

For many people, quitting is a major life change that often involves making several attempts over time before quitting for good. NRT assists with the physical addiction to nicotine while quit smoking counselling from a service such as Quitline helps with the behavioural and emotional aspects. Research has shown that the best outcomes are achieved when NRT or other medications such as Champix are combined with ongoing counselling and support.

Will I still experience cravings when using NRT?

Blood nicotine levels are lower in people using NRT when compared with people who smoke. This means that for those people who are heavy smokers, the standard doses of NRT may not be sufficient to manage nicotine cravings and withdrawal symptoms.

Cigarettes provide significantly more nicotine than any form of NRT so heavy smokers may still experience nicotine cravings. In these situations, the use of more than one form of NRT such as patches and gum (combination therapy) may be necessary. People who smoke tend to be very self aware about the amount of nicotine they need to manage withdrawal symptoms and are usually best able to determine what level of NRT is right for them.

Can anyone use NRT?

NRT can be used by most people who smoke. The key recommendations are:

- **Combination therapy:** patches can be used in combination with gum or other intermittent forms of NRT to reduce cravings for those who are more nicotine dependent.
- **Cut Down To Stop:** patches or other forms of NRT can be used to help reduce the number of cigarettes smoked prior to quitting.
- It is safer for young people (12 and older), pregnant women and some people with cardiovascular disease to use some forms of NRT rather than smoke. Consult your health professional for further advice.
- **'Stepping down' or 'weaning'** from higher to lower strength patches is no longer considered necessary. Using the 21 mg or 25 mg patch and then stopping is as effective.
- Using NRT to quit is always safer than continuing to smoke.
- For further information call **Quitline 13 7848** or speak with your GP.

What NRT products are there?

All NRT products are sold with a Consumer Medicine Information (CMI) leaflet. If this leaflet is not in the packet when NRT is purchased, then ask the pharmacist for one. It is recommended that this information be read before using any NRT product. A summary of NRT products is provided here but it is not a replacement for the CMI provided by the pharmaceutical company.

NRT products can be divided into two groups: patches and oral/intermittent forms (gum, inhalator, lozenge, mouth spray). All oral forms of NRT essentially work in the same way. They all provide nicotine by absorption through the lining of the mouth. Oral forms of NRT can be used as a cigarette substitute and are very effective in cutting down the number of cigarettes smoked prior to quitting.

The choice of an oral form of NRT will depend on personal preferences and many people try different forms of NRT before working out what suits them best.

Obtaining nicotine from NRT is very safe compared to smoking. If nausea or any other adverse effects from NRT are experienced, then you should reduce the amount you are using or stop using it, and speak to your pharmacist or GP. The experience of nausea may occur, but nicotine toxicity is unlikely to occur from the correct use of NRT products.

While NRT is a safe form of medication for adults who smoke, it is a poison and therefore caution needs to be exercised around small children. Caution is particularly needed with products such as the gum and lozenges that could be mistaken for lollies.

Which NRT product should I use?

There are a number of different brands of NRT available from chemists or supermarkets. Each brand has a range of different products available such as patches, gum, the inhalator, lozenges, mouth spray. All of these products are equally as effective if used as recommended and therefore the choice of product depends on personal preference. People who smoke are advised to discuss with a Quitline counsellor, a pharmacist or their GP which product might be best for them.

Nicotine patches on the PBS

From February 2011, nicotine patches became available on the Pharmaceutical Benefits Scheme (PBS).

The cost per prescription is subsidised by the Australian Government through the Pharmaceutical Benefits Scheme. Each prescription costs around \$6.30 for holders of a (Centrelink) Health Care Card, otherwise the cost is around \$38.80 (CPI adjusted yearly) for other patients.

Patches

The nicotine patch is designed to continuously deliver nicotine to the bloodstream via the skin. Blood plasma levels of nicotine slowly rise during the first few hours after application with the maximum level being reached after six to 10 hours. The 21 mg/24 hour patch is recommended for those smoking more than 15 cigarettes per day and have their first cigarette within 30 minutes of waking. Using this patch for 24 hours, however, may lead to vivid dreams and/or disturbed sleep. If this is experienced then it is advisable to remove the patch overnight. After patch removal, nicotine already in the skin continues to be absorbed for up to two hours.



If vivid dreams and/or disturbed sleep are experienced, then the 25 mg/16 hour patch may be a better alternative. However, when the patch is not worn overnight, strong nicotine cravings may be experienced in the mornings after waking. This is more likely in the early stages of quitting or cutting down when nicotine dependence is higher. Intermittent forms of NRT such as lozenges, inhalators and gum can be used to provide a more immediate dosage of nicotine while waiting for the nicotine from the patch to be delivered.

Cut Down To Stop: The patches marketed as 'Pre-quit' patches are actually 21 mg patches that can be used to cut down the number of cigarettes smoked prior to quitting. Recent research has found that using patches or intermittent forms of NRT to cut down the number of cigarettes smoked prior to quitting, doubles the success rate compared to using patches for abrupt quitting.

Clear patches provide the same therapeutic benefits as flesh-coloured patches and may be preferred as they are less obvious when the skin area is visible.

The patch should be applied to a clean, dry, hairless area of the skin above the waist such as the upper arm with the location changed daily to avoid skin irritation. Adverse effects of the patch may include itching and tingling of the skin at the application site, redness of the skin and sleep disturbances.

Nicotine mouth spray

The nicotine mouth spray was introduced in 2012 and is another oral or intermittent product like the gum, lozenge and inhalator. When used as directed, it provides a spray or mist of nicotine into the lining of the mouth and/or under the tongue. The nicotine is absorbed here and then travels to the brain via the blood circulation.

The mouth spray has a child-resistant feature that needs to be mastered before use. If the spray is new or hasn't been used for several days, it needs to be primed. The spray is released onto the inside of the cheek or under the tongue. Try to avoid the lips or the back of the throat as this can lead to a burning sensation. Avoid inhaling the spray or swallowing for a few seconds as the spray is most effective when held in the mouth. One or two sprays can be used each time a craving for a cigarette is felt. It is recommended no more than four sprays an hour or 64 sprays a day. There are approximately 150 sprays in each dispenser.

Side effects from excess usage can include nausea, salivation, abdominal pain, sweating, diarrhoea, headache, dizziness and hearing disturbance or weakness.

For more dependent smokers, the spray can be used in combination with a nicotine patch.

Inhalator

The Inhalator works by providing nicotine into the lining of the mouth where it is absorbed. Each cartridge lasts for about 40 minutes with continual use.

The Inhalator mimics the act of smoking and therefore assists with hand-to-mouth behaviour as well as treating nicotine addiction. It is puffed rather than inhaled as it is important for the nicotine to be held in the mouth where it is absorbed.

Gum

Nicotine gum can be used to actively control nicotine cravings when they are felt. The gum contains nicotine which is absorbed through the lining of the mouth and then enters the blood stream.



Chew Park Chew: Gum is available in two strengths, 2 mg and 4 mg, and needs to be chewed in a particular way to achieve maximum benefit. The gum should be chewed slowly until a peppery taste becomes strong and/or a tingling sensation is noticed. It then needs to be 'parked' between the gums/teeth and cheek until the taste has faded and then chewing is repeated.

The gum is available in a variety of flavours such as mint, fruit and the 'classic' nicotine flavour. Adverse effects of gum usage can include nausea and vomiting, indigestion, hiccups and occasionally headaches if the gum is chewed too rapidly. These unpleasant effects can be minimised by using the products as recommended.

Lozenge

The nicotine lozenge can be used to actively control nicotine cravings when they are felt. The lozenge is available in three strengths, 1.5 mg, 2 mg and 4 mg. The stronger lozenge is recommended for more nicotine-dependent smokers.

The lozenge is placed in the mouth and occasionally moved from side to side until completely dissolved, usually within 30 minutes. The nicotine from the lozenge is absorbed through the lining of the mouth. The lozenge should not be chewed or swallowed whole. People should not eat or drink while the lozenge is in the mouth.

This form of NRT is suitable for people who have problems with gum but prefer an oral form of NRT. Adverse effects are similar to the gum.

Using oral nicotine products

Eating or drinking can limit nicotine absorption from the mouth. It is recommended to wait 15 minutes after eating and drinking before using oral NRT. It is important to not eat or drink while using oral NRT.

How do I know if I need to use NRT?

NRT is only recommended for those people who are assessed as nicotine dependent. You can work out your level of nicotine dependence by answering the following two questions:

1. **How soon after waking do you smoke your first cigarette?**
 - a) Less than five minutes (3 points)
 - b) Five to 30 minutes (2 points)
 - c) 31 to 60 minutes (1 point)
 - d) More than 60 minutes (0 points)
2. **How many cigarettes do you smoke each day?**
 - a) More than 30 cigarettes (3 points)
 - b) 21 to 30 cigarettes (2 points)
 - c) 11 to 20 cigarettes (1 point)
 - d) One to 10 cigarettes (0 points)

SCORE	NICOTINE DEPENDENCE
5 or 6 points	Heavy
3 or 4 points	Moderate
2 points	Low

Knowing your nicotine dependence can help you decide which products would be most beneficial to help you quit. The following table can help with product selection.

The recommended treatment period for all products is eight to 12 weeks. Regular use beyond 12 months is not generally recommended, although long-term use of some forms of NRT has been reported with no adverse health effects.

PRODUCT	DOSAGE (as a guide)
Combination therapy	<p>For people with a Heavy dependence on nicotine and who experience cravings using only one form of NRT:</p> <ul style="list-style-type: none"> • 25 mg/16 hour patch in combination with 2 mg gum or lozenge. • 21 mg/24 hour patch in combination with 2 mg gum or 2 mg or 1.5 mg lozenge. • Patch in combination with any intermittent form of NRT.
Patch	<p>Heavy to Moderate dependence:</p> <ul style="list-style-type: none"> • 21 mg/24 hour patch or 25 mg/16 hour patch. <p>Moderate to Low dependence:</p> <ul style="list-style-type: none"> • 14 mg/24 hour patch—use one patch daily.
Nicotine mouth spray	<ul style="list-style-type: none"> • One or two sprays under the tongue or onto the inner cheek to relieve cravings. • Maximum of four sprays an hour or 64 sprays a day.

PRODUCT	DOSAGE (as a guide)
Inhalator	<ul style="list-style-type: none"> • One cartridge when you have an urge to smoke or every two to four hours. • For best results use three to six cartridges per day.
Gum	<p>Heavy to Moderate dependence:</p> <ul style="list-style-type: none"> • 4 mg—after the first two weeks you may prefer to use the 2 mg gum. <p>Moderate to Low dependence:</p> <ul style="list-style-type: none"> • 2 mg—use one piece per hour or 10–15 pieces per day.
Lozenge	<p>Heavy to Moderate dependence:</p> <ul style="list-style-type: none"> • 4 mg lozenge. <p>Moderate to Low dependence:</p> <ul style="list-style-type: none"> • 2 mg or 1.5 mg lozenge. • 1.5 mg lozenge (9–20 per day).

References

Action on Smoking and Health Australia. (2007). *Guidelines for Healthcare Professionals on using Nicotine Replacement Therapy for smokers not yet ready to stop smoking*. Sydney: Action on Smoking and Health Australia.

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Quitline® 13 7848

Quitline support can double your chances of quitting.

For information and support:

- call **13 7848**
- chat online at **quitlinesa.org.au**
- email **quitline@cancersa.org.au**
- fax **08 8291 4280**

quitlinesa.org.au

