

## Nicotine Replacement Therapy for Quitting Smoking



Reaching for a cigarette after a meal, during a break or with a beer is a habit many people enjoy. But it can cause many health problems, including heart and blood vessel disease, cough and lung diseases. Smoking can also cause cancer in the lungs, mouth, throat and more. For many people it is not easy to quit smoking. Doing without nicotine can cause many withdrawal symptoms, especially in the first week. People can get restless, aggressive or depressed, have a strong craving for cigarettes, find it hard to concentrate or have more of an appetite than usual.

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## How do smokers quit?

There are lots of different strategies for trying to stop smoking. About half of the smokers who succeed in quitting manage to do so without any particular support programme or treatment. Some reduce the number of cigarettes they smoke in stages, until eventually they manage to give up it completely.

Many smokers need help and support, though, to quit smoking long term. It usually takes more than one try. Smokers can get help from their family, from doctors, from quit smoking help services and from self-help groups. The method that is most likely to help people quit without major adverse effects is nicotine replacement therapy (NRT).

Out of the people who try therapies to help them quit, only about 1 in 10 (10 %) will still be tobacco-free a year later. But if they try NRT, more will be successful. You can read more about these research results here ([URL: http://www.informedhealthonline.org/index.220.en.html](http://www.informedhealthonline.org/index.220.en.html)). That may not look like a big difference at first glance. But when you remember that smokers usually need several attempts to quit, NRT can eventually have a real effect on success rates.

## What is NRT?

Nicotine is the substance that makes smoking addictive. Most smokers experience unpleasant withdrawal symptoms when they try to quit. NRT can help to reduce these. With NRT the person gets nicotine into their system without smoking cigarettes. Nicotine chewing gum was the first form of NRT. It was developed in the 1970s. Since then many other types have been developed, including patches, lozenges, nose sprays and inhalers. Nose sprays and inhalers, though, are not available in Germany. Because of regulations, statutory health insurers cannot reimburse quit smoking medications in Germany.

## How does NRT work?

It does not matter whether it is a patch, gum, lozenge or spray: all NRT products provide a smaller and slower dose of nicotine than smoking a cigarette. But the person is not getting harmful substances like tar and carbon monoxide into their system.

You chew nicotine gum just like ordinary chewing gum. The nicotine gets into the body through the mucus membranes. It takes about 30 minutes to take maximum effect. Gums come in lower (2 mg) and higher (4 mg) doses, as well as in different flavours.

Nicotine patches stick on the skin. The patch is changed every day. The nicotine goes through the skin into the body slowly and continuously. That means it takes several hours to reach the highest concentration of nicotine in the blood. Patches come in different doses and work for 16 to 24 hours.

Nicotine lozenges release the nicotine through sucking. They work in much the same way as gum. After about an hour, the maximum amount of nicotine is in the bloodstream. They come in doses of 2 mg or 4 mg.

Nicotine sprays are sprayed into the nose much like nasal sprays for the cold. The body picks the nicotine up very quickly through the membranes in the nose.

A nicotine inhaler is a plastic tube that is sucked on - a bit like smoking a cigarette. An exchangeable cartridge or a capsule is inserted into the inhaler. It takes about 30 minutes to reach the maximum level of nicotine.

Availability of NRT products and regulations about them vary from country to country. In Germany, NRT products can only be purchased through a pharmacy, but a prescription is not needed.

## Does NRT help people quit?

If a smoker who needs help to quit uses NRT, then their chance of quitting for at least half a year is higher. It is not known though, how much NRT helps smokers who are smoking less than 15 cigarettes a day. Which product suits best depends on the individual preferences of the smoker and the costs.

Using nicotine patches for eight weeks is just as effective as using them for longer. There is no proof from trials as

to whether slowly tapering off with patches is more effective than just stopping them at once. Patches that are worn only during the day (16 hours) appear to be just as effective as those that are worn around the clock (24 hours). For heavy smokers, the higher dose of gum works better than the low dose.

## **What about adverse effects?**

Most people tolerate NRT products well. Nose sprays can irritate the membranes inside the nose, particularly if people have sinusitis or a runny nose. Patches can cause skin irritation or a rash where they are applied. Chewing gum can sometimes cause aches in the jaw or stomach problems.

There is no strong evidence that NRT used in the normal way causes heart or blood vessel problems. There is some risk, though, that people might become dependent on NRT products instead of smoking.

When people quit smoking, some of them will gain weight. It is not known whether the extra weight will last.

## **Can you use NRT during pregnancy?**

Smoking increases the risk of a woman having a miscarriage, or that the baby will be born too early or too small. These babies are at risk of serious lung complications.

Women are more likely to quit smoking while they are pregnant than at other times. About 4 out of 10 women (40 %) have already stopped smoking by the time of their first antenatal or prenatal visit. Quit smoking programmes can help pregnant women to quit. NRT has not been shown to be more effective for pregnant women than other programmes, and it is not yet known if NRT causes unborn babies any harm.

## **This additional information has been provided by the U.S. National Library of Medicine:**

In the U.S., nose sprays and inhalers are available but a prescription is needed.

**Glossary**

## evidence

Evidence is what we call scientific proof from well-conducted, good-quality scientific trials that have been carefully designed to answer specific questions. Depending on the types of questions, different scientific research methods (types of study) are most appropriate to find reliable answers to these questions. Randomized controlled trials (RCTs), for example, are the best way to get reliable evidence on the effectiveness of medical treatments (interventions). This type of study, however, is not the best form of evidence for all possible questions, and does not provide the best answers to all kinds of questions, either. Epidemiological studies, for example, are very suitable for establishing well-founded proof for the spreading of a disease in the population.

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The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

## **Evidence basis of our health information**

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at **[www.informedhealthonline.org](http://www.informedhealthonline.org)**

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