

## Smoking and the risk of stroke

Smoking greatly increases your chances of developing serious health conditions like stroke. Stopping smoking can significantly reduce those risks. This factsheet explains how smoking increases your risk of stroke and describes the support available to help you to stop.

Around a quarter of adults in the UK smoke. Cigarettes contain **nicotine**, a substance that makes them **highly addictive**. Approximately 100,000 smokers die each year in the UK because of their habit. The majority of these deaths are due to lung cancer and other chest diseases, such as bronchitis and emphysema.

**Smoking also significantly increases the risk of heart disease and stroke.** In fact, smokers are three times more likely to have a stroke than non-smokers. **The more you smoke, the more this risk increases.** If you smoke 20 cigarettes a day, you are six times more likely to have a stroke compared to a non-smoker.

### How does smoking cause stroke?

When you smoke, you inhale tobacco smoke, which contains over **7,000 toxic chemicals** including carbon monoxide, formaldehyde and hydrogen cyanide. These chemicals are transferred from your lungs into your bloodstream, changing and **damaging cells** all around your body. The changes that these chemicals cause can increase your risk of stroke.

Cigarette smoke can affect your body's **cholesterol levels**. Cholesterol is a type of fat carried around your body in particles called lipoproteins. Smoking reduces the levels of 'good' cholesterol (also called HDL cholesterol) in your bloodstream and increases levels of 'bad' cholesterol (also called LDL cholesterol). Low levels of 'good' cholesterol increase your risk of having a stroke.

The carbon monoxide you inhale from cigarette smoke increases levels in your blood making it more likely for **artery walls** to become **damaged**. The chemicals you inhale also affect the stickiness of your blood and production of a type of blood cell called a platelet. This increases your blood's tendency to form **clots**.

These factors increase **smokers' risk of developing atherosclerosis** whereby arteries become more narrow and 'furred up.' This reduces the blood flow through them so **blood clots are more likely to form**. If a clot forms in an artery leading to the brain, it can then cause a blockage, cutting off the blood supply and causing a stroke. This type of stroke is known as an ischaemic stroke. Smoking nearly doubles your risk of having an ischaemic stroke.

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Smokers are also more likely to develop **high blood pressure** a major risk factor for stroke. Smoking is particularly dangerous for people who have high blood pressure. High blood pressure contributes to damage to our arteries. A smoker with high blood pressure is also fifteen times more likely to have a subarachnoid haemorrhage (a type of stroke caused by a bleed) than those who have never smoked or do not have high blood pressure.

If you have had a stroke, it is strongly recommended that you stop smoking to help prevent any further strokes. Research has shown that you are at greatest risk of another stroke shortly after the first.

### Why should I stop smoking?

Quitting smoking will improve your health, make your life better and the benefits are noticeable within hours!

**Within 8 hours** your oxygen levels return to normal and carbon monoxide levels reduce by half.

**48 hours** later your ability to taste and smell improves.

**Within 72 hours** breathing becomes easier and your energy levels go up.

**After 1 month** your skin loses its greyish pallor and is less wrinkled.

**Between 3 – 9 months**, any coughing and wheezing eases and your lung function improves by up to 10%.

**After 1 year** your risk of a heart attack is half that of a smoker.

**After 5 years** your risk of stroke is significantly reduced to the same as a lifetime non-smoker.

**After 10 years** your risk of developing lung cancer falls to half that of a smoker.

**After 15 years** your risk of having a heart attack is the same as someone who has never smoked.

Breathing in someone else's smoke is dangerous. Approximately 11,000 people die in the UK each year because of **passive smoking**. Children are particularly vulnerable to passive smoking, especially if they are very young and are not able to leave the room. Children of smokers are more likely to develop respiratory problems and ear infections. By stopping, you are greatly reducing the risks you are posing to your family, friends and people around you.

Smoking can have a negative impact on your **fertility**. It can take women longer to conceive and increase their risk of miscarriage and of having a premature birth. Men who smoke have lower sperm counts and are more likely to suffer from impotence.

It's also a **costly** habit. If you smoke 20 cigarettes a day, you will spend £39.90 over a week, £171 a month, £2,081 a year, and £20,805 in 10 years! Life insurance is also more expensive. Just think of all the money you will save by stopping!

If you smoke, you are more likely to suffer **complications** during and following **surgery** such as breathing difficulties, heart and lung complications and wound healing problems. It is best to stop smoking before an operation, but cutting down can also help.

### Help to stop smoking

If you want to stop smoking, more help is available than ever before. This includes specialist NHS clinics, a range of support services like counselling, group therapy

and helpline support, nicotine replacement products and medication. Not all smokers are the same so **find out what works best for you**.

Because nicotine is so addictive, and the smoking habit becomes so automatic, many people need support to help them stop smoking. Research shows **you are four times more likely to succeed at stopping if you have support**. It is normal for people to make more than one attempt before they stop smoking and quit for good, so don't be disheartened if you have tried to quit before and didn't manage it at that time.

Stopping smoking can result in a number of **withdrawal symptoms** such as cravings, restlessness, irritability, depression, difficulty concentrating, sleep disturbance or an increased appetite. **These symptoms are temporary and usually disappear within a few weeks**.

Many people are concerned about **gaining weight** if they give up smoking. If this happens, the amount of weight gained is usually relatively small, and the risks associated with smoking are much greater than those caused by weight gain.

Following a low calorie diet or receiving cognitive behavioural therapy from a qualified counsellor, can help to reduce weight gain and there is evidence that some nicotine replacement products can reduce your chances of gaining weight. **Talk to your GP** about the options available to you.

### Smoking cessation clinics

Smoking cessation clinics offer support to help you quit. After joining a service, you will be able to see **a trained adviser weekly**, if necessary, and on your own or as part of a group. You will receive information about giving up, aids such as nicotine replacement products and medication. You will also have the valuable help and support of others in the same situation. Many groups have carbon monoxide monitors so members can track how this poison leaves their bodies.

You can find out about smoking cessation clinics in your area by contacting the NHS Smoking Helpline or the Quitline (see 'Useful organisations' at the end of this factsheet).

If you find it difficult to attend clinics or group meetings, you can still benefit from the **advice and information packs** that are available from various organisations and the NHS. **Ask at your doctor's surgery** or contact one of the organisations listed at the end of this factsheet.

If you live in Scotland, you can chat online to a **smokeline** adviser. They can give you information on support services in your area and products like nicotine replacement therapy.

In England, the **Smokefree Together Programme** is available if you have a busy lifestyle or want to quit by yourself. This support programme is designed to offer practical help and advice for people giving up smoking. You will receive mail packs, text alerts at crucial times, emails and phone calls from advisers. To register, simply decide on your stop date, then contact the England NHS Smoking Helpline. The Smoke Free website has 'Quit Kits', 'Quit Apps' and

'Quit Widgets' for your computer and smart phone.

### Medication

There are different types of medicines that can help you stop smoking such as nicotine replacement therapy (NRT) or medicines like zyban and champix. **You can buy NRT products over the counter** from your pharmacist, but speak to your doctor or the adviser at your 'stop smoking' clinic about which type of treatment is most suitable for you.

#### Nicotine replacement therapy (NRT)

NRT steadily **releases nicotine into your bloodstream** without you having to inhale the poisonous chemicals from cigarette smoke. Using NRT **helps to relieve smoking withdrawal symptoms** such as cravings, restlessness, irritability and depression. After setting a target stop date, you can start on your chosen NRT. Over time, this dose will be slowly reduced until you no longer need it.

There is a wide range of NRT products available – they include:

**Patches**, which can be worn all day and offer a continuous supply of nicotine into the bloodstream. They can be used with other forms of NRT like gum, lozenges, an inhalator or nasal spray if you have found it difficult to give up smoking before or if you are highly dependent on nicotine.

**Gum** helps to relieve the craving for a cigarette. The strength of the gum and number of pieces you use will be determined by how much you have smoked. You chew this type of gum slowly, until the taste becomes stronger, and hold it between your gums and cheek to allow the nicotine to be

absorbed into the bloodstream, repeating this action when the taste fades.

**Lozenges** work in a similar way to gum, providing short bursts of nicotine. You suck the lozenge until the taste becomes stronger and store it inside your cheek until it fades, starting again when this happens. They usually dissolve after 20 – 30 minutes.

**Nasal sprays** are good for heavy smokers or people who get severe withdrawal symptoms. The nicotine is quickly absorbed into the blood vessels in the nose, relieving craving quickly.

**Inhalators** look like a cigarette and are helpful if you crave nicotine and miss the physical action of smoking.

**Microtabs** help relieve the cravings for a cigarette. They dissolve under your tongue and should not be chewed. The dosage amount depends on how much you have smoked. Treatment lasts for up to three months and it is important to complete the course.

Research has shown that **NRT can double your chances of successfully stopping smoking**, especially if you also go to smoking cessation clinics.

**Note:** NRT should be started under medical supervision in someone who has had a **recent stroke** as this type of therapy may cause blood vessels to narrow. In most cases, NRT will still be prescribed as the risks associated with continuing to smoke are far greater than the risk of using NRT after a stroke.

#### Champix (varenicline)

Champix is a medicine that mimics the

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effects of nicotine on the body. It helps to reduce cravings, withdrawal symptoms and reduces the satisfaction gained from smoking. It is **available on prescription**, and treatment lasts for three months. You begin to take the tablets whilst still smoking and set a quit date for one or two weeks afterwards. It may not be suitable if you have kidney problems, depression or epilepsy so **talk to your doctor** for further advice. If you are taking Champix, you should also be offered support from a local 'stop smoking' service.

### Zyban (bupropion)

Zyban is a tablet **available on prescription**. It works by altering the levels of neurotransmitters in the brain (chemicals that are involved in sending messages between nerve cells). This helps to reduce the urge to smoke and withdrawal symptoms. It is usually taken for seven to nine weeks, starting at a low dose for the first six days, which is then increased. If you have not completely stopped smoking after seven weeks, your GP may ask you to stop taking it. Zyban is not suitable for everyone, particularly those with a history of seizures such as epilepsy or depression. **Talk to your doctor** for further advice. If you are taking Zyban you should be encouraged to access support from a local 'stop smoking' service.

**Note:** Champix and Zyban may not be available in some areas in Wales, as local Health Boards have chosen not to use them as treatment. This is also the case for Zyban in certain areas of Scotland.

### Other aids

There are other methods that can help you to stop smoking. Evidence shows that **glucose tablets** may help reduce cravings. **Acupuncture** and **hypnotherapy** have been successful for some, though not as

much as NRT. If you wish to try one of these therapies, make sure you see a qualified practitioner. For more information read our *R04 Complementary therapy resource sheet*. **Herbal products**, like herbal cigarettes and self-help books, are also available but it is not clear how useful they are. These products are not available on the NHS as they have not been tested as rigorously as required.

## Tips to help you stop

**Write down** the reasons why you want to quit. Think about how smoking can affect your family, the health reasons or even the financial cost. Keep the list on you and read it when you start to feel tempted to smoke.

**Set a date** to stop and stick with it. You can choose your birthday, New Year's Day or go for **No Smoking Day**.

Seek **help and support**. Get your friends and family to give you encouragement. This can help keep you going. Make use of the **NHS stop smoking services**; ask your GP what is available in your area.

**Combat those cravings!** A craving can last for five minutes; have a plan on how you will cope with them. Distract your hand by doodling. Do a crossword, brush your teeth, have a shower, go for a walk or call a friend.

**Stay positive:** tell yourself that you are going to do it!

## Useful organisations

All organisations are UK wide unless otherwise stated.

### Stroke Association

**Stroke Helpline:** 0303 3033 100

**Website:** [stroke.org.uk](http://stroke.org.uk)

Contact us for information about stroke, emotional support and details of local services and support groups.

### NHS Smoking Helpline

#### England

**Tel:** 0300 123 1044

**Website:** [www.nhs.uk/smokefree](http://www.nhs.uk/smokefree)

#### Wales:

**Tel:** 0800 085 2219

**Website:** [www.stopsmokingwales.com](http://www.stopsmokingwales.com)

#### Northern Ireland

**Website:** [www.want2stop.info](http://www.want2stop.info)

#### Scotland

**Smokeline:** 0800 84 84 84

**Website:** [www.canstopsmoking.com](http://www.canstopsmoking.com)

Their helpline can provide:

- one-to-one confidential advice from specially trained counsellors
- guidance on stopping smoking and help with associated problems
- leaflets on preparing to quit smoking
- guidance on accessing support from local smoking cessation services
- access to one to one counselling and group therapy.

### Action on Smoking and Health (ASH)

**Tel:** 020 7404 0242

**Website:** [www.ash.org.uk](http://www.ash.org.uk)

#### ASH Scotland

**Tel.** 0131 225 4725

**Website:** [www.ashscotland.org.uk](http://www.ashscotland.org.uk)

#### Ash Wales

**Tel:** 029 2049 0621

**Website:** [www.ashwales.org.uk](http://www.ashwales.org.uk)

A campaigning public health charity working to eliminate the harm caused by tobacco.

### No Smoking Day

**Email:** [nosmokingday.@bhf.org.uk](mailto:nosmokingday.@bhf.org.uk)

**Website:** [www.nosmokingday.org.uk](http://www.nosmokingday.org.uk)

Organise the No Smoking Day on the second Wednesday of March each year.

**Disclaimer:** The Stroke Association provides the details of other organisations for information only. Inclusion in this factsheet does not constitute a recommendation or endorsement.

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For sources used, visit [stroke.org.uk](http://stroke.org.uk)

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