

## Smoking and the risk of stroke

This guide looks at how stopping smoking can reduce your risk of a stroke, and offers tips and advice about quitting.

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### What are the risks?

Smoking makes you twice as likely to die if you have a stroke, and the more you smoke, the greater your risk of stroke. If you smoke 20 cigarettes a day, you are six times more likely to have a stroke compared to a non-smoker. Tobacco smoke has many different effects on the body including thickening the blood, increasing the risk of blood clots and narrowing the arteries, as well as restricting oxygen in the blood.

### The impact of smoking

Just under 20% (one in six) adults in the UK are smokers. Around 96,000 people in the UK die every year from smoking-related illnesses. These include stroke, heart disease and cancers.

### How does smoking cause stroke?

Tobacco smoke contains over 7,000 toxic chemicals, including carbon monoxide, formaldehyde, arsenic and cyanide. These chemicals are transferred from your lungs into your blood stream, 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 vital substance in your body, but if there is too much in your blood it can cause heart disease and stroke. Smoking reduces the levels of 'good' cholesterol (also called HDL) in your blood stream and increases levels of 'bad' cholesterol (also called LDL). Having low levels of 'good' cholesterol in your body increases your risk of stroke.

When you inhale cigarette smoke, carbon monoxide and nicotine enter your bloodstream. The carbon monoxide reduces the amount of oxygen in your blood, and the nicotine makes your heart beat faster and raises your blood pressure. This increases your risk of a stroke. Smoking can also trigger an episode of atrial fibrillation, a heart condition that is a risk factor for stroke.

The chemicals in smoke also make your platelets, a type of blood cell, more likely to stick together. This increases the chance of a clot forming.

These factors increase smokers' risk of developing atherosclerosis, a condition where arteries become narrowed and harden. This reduces the blood flow and makes blood clots more likely to form. If a clot occurs in an artery leading to the brain, it can cause a stroke when it blocks the

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blood supply to part of the brain. This type of stroke is known as an ischaemic stroke. Smoking nearly doubles your risk of having an ischaemic stroke.

Smokers are also more likely to develop high blood pressure, which is a major risk factor for stroke. Smoking is particularly dangerous for people who already have high blood pressure, because high blood pressure contributes to damage to the arteries. If you are a smoker with high blood pressure, your arteries will narrow at a much faster rate, significantly increasing your risk of stroke.

### Why should I stop smoking?

Quitting smoking will reduce your risk of a stroke and reduce your risk of other health problems.

If you have had a stroke, you'll be advised to stop smoking to reduce your risk of another stroke.

### The benefits start right away

**Within eight hours**, your oxygen levels return to normal and carbon monoxide and nicotine levels reduce by more than half.

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

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

**After 2–12 weeks** your circulation improves.

**Between three and nine months**, any coughing and wheezing eases and your lung function improves by up to 10%.

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

**After 10 years** your chances of developing lung cancer fall to half that of a smoker.

**After up to 15 years** your risk of having a stroke is around the same as someone who has never smoked.

### Passive smoking

Breathing in someone else's smoke is hazardous. Children are particularly vulnerable to passive smoking as they have less well-developed airways, lungs and immune systems. Children of smokers are more likely to develop respiratory problems and babies are at greater risk of cot death. By stopping, you are greatly reducing the risks you are posing to your family, friends and people around you.

### Save money

On average people save around £250 a month by giving up smoking. You might be surprised by how much you can save. Try the NHS Smokefree online calculator to work out how much better off you could be if you quit: [www.nhs.uk/smokefree/why-quit](http://www.nhs.uk/smokefree/why-quit).

### Help to stop smoking

If you want to stop smoking, more help is available than ever before. In England and Wales this includes one-to-one and group support with trained advisors at your local NHS Stop Smoking Service (including prescriptions for medicines and patches to help with withdrawal symptoms), support via social media, an email support programme, a quitting app and a telephone helpline. All this

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support is available free from the NHS. See NHS Smokefree in *Other sources of help and information* for contact details.

NHS services in Scotland, Wales and Northern Ireland also offer help with stopping smoking. Smoking advisors offer local one-to-one or group support, and telephone and online support services and apps are also available.

Because nicotine is so addictive, and the smoking habit becomes so automatic, many people need support to help them stop smoking. Research shows that 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, 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. Although many people do put on some weight after giving up, it's possible to avoid this. If you combat your cravings using medications or e-cigarettes, it can help you avoid extra snacking. Keep healthy snacks around like nuts, fresh fruit and vegetable sticks. Doing some exercise can also help by reducing cravings and burning calories. Ask your local NHS Stop Smoking Service for advice and speak to your GP if you're very concerned about your weight.

## Medication and stop-smoking aids

There are several different types of medicine and stop-smoking aids that can help you stop smoking:

- nicotine replacement therapy (NRT) including patches, gum, lozenges, microtabs, inhalators and nasal sprays
- Champix tablets (varenicline)
- Zyban tablets (bupropion)
- e-cigarettes
- other stop-smoking techniques.

Speak to your doctor or the advisor at your local Stop Smoking Service about which type of treatment is most suitable for you.

## Nicotine replacement therapy (NRT)

NRT steadily releases nicotine into your blood stream without you having to inhale cigarette smoke. Using NRT helps to relieve smoking withdrawal symptoms, such as cravings, restlessness and irritability. After setting a target stop date, you can start on your chosen NRT.

There is a wide range of NRT products available. They are available on prescription from an NHS Stop Smoking Service. You can also buy them over the counter from a pharmacy or supermarket.

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### Types of nicotine replacement therapy (NRT)

**Patches**, which deliver a continuous supply of nicotine into the bloodstream. There are two kinds available: 16 hours for daytime use and 24 hours to be worn day and night for those with particularly strong cravings. They come in various strengths, and users should aim to reduce the level of nicotine gradually whilst quitting.

**Gum** delivers bursts of nicotine through chewing. 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** can work for heavy smokers or people who get severe withdrawal symptoms. The nicotine is quickly absorbed into the blood vessels in the nose, relieving cravings quickly, although they can produce side effects such as nose and throat irritation, coughing and watery eyes.

**Inhalators** made of plastic and shaped to look like cigarettes. Users suck on the tube to release a burst of nicotine. They are particularly suited to people who miss the physical action of smoking.

**Microtabs** are very small tablets that dissolve under your tongue and should not be chewed. The dosage amount depends on how much you have smoked. They may suit users who are seeking a more discreet aid to stopping smoking.

### Using NRT after a stroke

NRT should only be started under medical supervision in someone who has had a very recent stroke (within the last four weeks). In most cases, NRT will still be prescribed as the risks associated with continuing to smoke are usually greater than the risk of using NRT after a stroke.

### Champix (varenicline)

Champix is a tablet that mimics the 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 usually 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 is not suitable for people with some other conditions, so talk to your doctor for further advice.

### Zyban (bupropion hydrochloride)

Zyban is a tablet available on prescription. It is usually taken for a couple of months. Tell your doctor about any other pre-existing conditions you have, as Zyban is not suitable for some people.

## E-cigarettes

Some people use e-cigarettes (electronic cigarettes) as a way to quit smoking. E-cigarettes provide nicotine without all of the toxins in tobacco smoke. Public Health England (the body that oversees health for the government) now recommends that smokers who have tried other methods of quitting without success should be encouraged to try e-cigarettes by advisors at Stop Smoking Services. They are not currently available on prescription.

## Other stop-smoking techniques

Acupuncture and hypnotherapy have been successful for some, but have not been subjected to any large-scale clinical trials and are not licenced as remedies for quitting smoking on the NHS. If you wish to try one of these therapies, make sure you see a qualified practitioner.

## Tips to help you stop

**Write down all of the reasons 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 Stoptober (see *Other sources of help and information*). The important thing is to choose a day and stick to it.

**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 or look online to see 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!

## Where to get help and information

### From the Stroke Association

#### Talk to us

Our Stroke Helpline is for anyone affected by a stroke, including family, friends and carers. The Helpline can give you information and support on any aspect of stroke.

Call us on **0303 3033 100**, from a text phone **18001 0303 3033 100** or email **info@stroke.org.uk**.

#### Read our publications

We publish detailed information about a wide range of stroke topics including reducing your risk of a stroke and rehabilitation. Read online at **stroke.org.uk** or call the Helpline to ask for printed copies.

### Other sources of help and information

#### Action on Smoking and Health (ASH) (England)

**Website:** [www.ash.org.uk](http://www.ash.org.uk)  
**Tel:** 0207 404 0242

#### ASH Scotland

**Website:** [www.ashscotland.org.uk](http://www.ashscotland.org.uk)  
**Tel:** 0131 225 4725

#### ASH Wales

**Website:** [www.ashwales.org.uk](http://www.ashwales.org.uk)  
**Tel:** 029 2049 0621

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

#### NHS Smokefree (England)

**Website:** [www.nhs.uk/smokefree](http://www.nhs.uk/smokefree)  
**Helpline:** 0300 123 1044

#### Help me quit (Wales)

**Website:** [www.helpmequit.wales](http://www.helpmequit.wales)  
**Helpline:** 0800 085 2219

#### Want 2 stop! (Northern Ireland)

**Website:** [www.want2stop.info](http://www.want2stop.info)  
**Tel:** 0808 812 8008

#### NHS inform (Scotland)

**Website:** [www.nhsinform.scot/stopping-smoking](http://www.nhsinform.scot/stopping-smoking)  
**Smokeline:** 0800 84 84 84

#### One You: Smoking

**Website:** [www.nhs.uk/oneyou/smoking](http://www.nhs.uk/oneyou/smoking)  
Offers useful information and advice on smoking as part of Public Health England's nationwide healthy living campaign. Their Stoptober campaign takes place each autumn, and you can join for support with stopping.

# Smoking and the risk of stroke

## Keeping in touch

At the Stroke Association, we understand that the impact of a stroke can turn everything upside down in an instant, not just for the stroke survivor but for their loved ones too.

We are proud to be the leading stroke charity in the UK, changing the world for people affected by stroke. As you may know, our vital work covers many areas, including providing support and information to stroke survivors and their families, funding research into stroke treatment and care, and campaigning to raise awareness of stroke.

We are determined to conquer stroke, but we cannot do it alone.

Keep in touch and find out more about our work. This includes groundbreaking research developments, other services that might benefit you and opportunities to get involved with appeals, campaigns or volunteering for the Stroke Association.

To keep in touch, either fill out our online contact form at [stroke.org.uk/signup](https://stroke.org.uk/signup) or complete your details below and send them to our freepost address:

**Freepost RSZL-SAUL-GRBK**  
**Keeping in touch**  
**Life After Stroke Centre**  
**Church Lane**  
**Bromsgrove**  
**Worcestershire B61 8RA**

### Your contact details

**I am a:**

- stroke survivor     family/friend  
 carer                 other

**First name:**

**Surname:**

**Address:**

**Town/city:**

**County:**

**Postcode:**

**Email:**

**Telephone number:**

**I would like to receive Stroke News:**

- online (we'll email you to let you know when an online copy is available)  
 by post (we'll send you a free copy)

- I'm happy for the Stroke Association to keep in touch with news updates and ways to get involved**

**I'm happy to be contacted by:**

(please tick all that apply)

- post     telephone     email

You can change or stop the way we contact you at any time by calling our friendly Supporter Care team on **0300 330 0740**, or by emailing [supportercare@stroke.org.uk](mailto:supportercare@stroke.org.uk).

## About our information

We want to provide the best information for people affected by stroke. That's why we ask stroke survivors and their families, as well as medical experts, to help us put our publications together.

### How did we do?

To tell us what you think of this guide, or to request a list of the sources we used to create it, email us at [feedback@stroke.org.uk](mailto:feedback@stroke.org.uk).

### Accessible formats

Visit our website if you need this information in audio, large print or braille.

### Always get individual advice

Please be aware that this information is not intended as a substitute for specialist professional advice tailored to your situation. We strive to ensure that the content we provide is accurate and up to date, but information can change over time. So far as is permitted by law, the Stroke Association does not accept any liability in relation to the use of the information in this publication, or any third-party information or websites included or referred to.

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We rely on your support to fund life-saving research and vital services for people affected by stroke. Join the fight against stroke now at [stroke.org.uk/fundraising](http://stroke.org.uk/fundraising).  
**Together we can conquer stroke.**

The Stroke Association is registered as a charity in England and Wales (No 211015) and in Scotland (SC037789). Also registered in Northern Ireland (XT33805), Isle of Man (No 945) and Jersey (NPO 369).