

Finding strength through support



After a stroke, your ability to taste and smell may change. This guide can help you understand why this happens and how to get help if you need it. There are also practical tips for stroke survivors, family and friends.

Find more useful information and tips at **stroke.org.uk**, or call our Stroke Support Helpline for printed copies of our guides.

Useful topics include:

- Physical effects of stroke stroke.org.uk/physical-effects
- Healthy eating and stroke stroke.org.uk/healthy-eating
- Swallowing problems after stroke stroke.org.uk/swallowing-problems

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The impact of taste and smell changes

Although problems with taste and smell after a stroke can have a big impact on your life, they are not always discussed as part of medical treatment. Some people may experience a change to their senses of taste and smell soon after a stroke, but these changes may improve. There are things you can do that might help your recovery.

People often tell us changes to taste and smell affect their quality of life or may stop them from eating a healthy diet. It can also have an impact on your physical and emotional wellbeing. So if you're having difficulties, contact your GP or stroke nurse and ask for help.

Emotional impact

We may not think about taste and smell very much, but they play a part in our feelings and memories.

Taste has an emotional and social impact. The pleasure you get from eating adds to your enjoyment of life. If you stop liking your favourite food and drink, this can be upsetting and impact your appetite.

Eating with other people can also be an important social activity. Some people say they feel isolated if they are not able to enjoy their food with everyone else.

Smell can also trigger powerful emotions such as disgust caused by the bad smell of a dirty bin, or happiness from a scented flower. Smell can be part of attraction, such as your partner's perfume or aftershave. Smells can give you information, such as the smell of coffee suggesting a café is nearby.

Smells can bring back memories, such as the smell of seaweed making you think of a holiday by the sea. Losing the ability to smell can make you feel like you're missing out on some experiences.

It can also be upsetting if your senses of taste and smell are distorted and you experience bad tastes or smells.

Safety and hygiene

If you cannot smell, you might not notice your own body odour or bad smells at home. These smells would normally prompt you to take a shower or clean the room

You might also miss smells which alert you to danger, such as the smell of smoke, gas or chemicals in the air. We also use our senses of taste and smell to help us avoid food that's gone off. Visit **fifthsense.org.uk/safety-advice** for tips on safety when you have loss of smell.

Impact on your health and stroke recovery

Reduced appetite

The taste and smell of food give you an appetite and help you enjoy food. Eating well and drinking enough are important for your recovery. If you cannot taste or smell properly, it can reduce your appetite and you might eat or drink less than you need to. This can lead to you losing weight or not getting the nutrients you need. If you do not drink enough, you could become dehydrated.

Being undernourished or dehydrated can make you feel tired, low in mood or have trouble concentrating. You might be more likely to get infections and injuries can take longer to heal.

Eating too much

You may over-eat, perhaps because you're trying to get more satisfaction from food when it's lacking in flavour. This can lead to gaining too much weight, which can raise the risk of another stroke.

Seeking out certain tastes

You may seek foods with a certain taste and avoid others, perhaps because some things are very bland or tastes are distorted. This can lead to more health problems. For example, having more sweet food and drink can lead to weight gain and tooth decay, while having lots of salty food can raise your blood pressure.

What are taste and smell?

The senses of taste and smell work together. Your tongue can detect five basic tastes (salty, sweet, bitter, sour and 'umami' or savoury). Flavour is different from taste, because it depends mainly on your sense of smell. That's why food has less flavour when you have a blocked nose.

Smell, taste and flavour

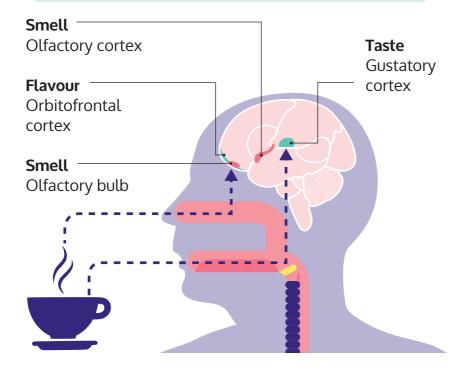
This is how your nose, tongue and brain work together to detect smells, tastes and flavours:

- 1. When something gives off a smell, such as coffee, it means millions of smell molecules are rising from the coffee into the air. When you breathe, the molecules hit the smell receptor cells at the back of your nose. Taste works in the same way. When you eat or drink, molecules hit the taste receptors on your tongue.
- **2.** The taste and smell receptors send information through nerves into the brain. The brain interprets the information as smells and tastes.
- **3.** Inside the brain, taste and smell information are combined to let you detect and identify flavours.

4. Areas of the brain dealing with memory, learning and emotion are also involved in taste and smell. So smells and tastes can be linked to feelings and memories.

Other sensations from food

The nose and tongue are part of our chemosensory system. This system allows us to understand the world through molecules (chemicals) that come from the objects and materials around us. As well as taste and smell, we have other chemosensory responses that give different sensations from food, such as heat from chilli peppers and coolness of mint. Receptors in your mouth help you detect food textures such as crunchy or smooth.



What causes changes to taste and smell after a stroke?

Stroke damage in the brain

A stroke happens when the blood supply to part of your brain is cut off, killing brain cells. A stroke can cause changes to any of your senses, including vision, hearing, touch, taste and smell. If a stroke damages the parts of the brain that interpret information about taste and smell from your nose and tongue, it causes changes to your senses of taste and smell.

Your stroke is unique to you, so the exact effect depends on how big the area of damage is and where it is in your brain. For more information on the different types of changes to taste and smell see **page 12**.

Like many effects of stroke, taste and smell changes can recover in the first few weeks and months after a stroke. If you have longer-lasting changes, there are treatments and practical steps that may help.

What else could be causing my problems with taste and smell?

It's a good idea to speak to your GP or stroke nurse to find out if something else could be causing or contributing to your problems with taste and smell. Other causes may include:



Medications

Some common medications can cause a bad taste, loss of smell or dry mouth. They include some medications often used after a stroke, such as blood pressure, cholesterol and muscle relaxant medications. Some antibiotics, diabetes medication, antidepressants and anti-inflammatories can also do this.



Infections

Infections in your nose or sinuses can cause a bad taste in the mouth or loss of taste and smell. Infections of the mouth and teeth can also have this effect, so good oral hygiene is important. Turn to **page 20** for more information.

Taste and smell changes after a stroke



Swallowing problems

Swallowing problems after a stroke can give you a dry mouth. This may lead to a bad taste, as well as making an infection more likely. A speech and language therapist can assess you and give treatment for swallowing problems. For more information, visit stroke.org.uk/swallowing-problems or call our Helpline for printed copies.



Diabetes

Diabetes has been linked to a loss of taste and smell, and some diabetes medication can cause a metallic taste in the mouth.



Other conditions

Other conditions, such as dementia, cancer and Parkinson's disease, can affect taste and smell.



Migraines and seizures

Some migraines and seizures can be preceded by taste or smell disturbances.



Age

Our senses of taste and smell decrease naturally with age.



Covid-19 can cause a loss of smell and taste. To get medical advice about Covid-19, visit 111.nhs.uk or call 111.

Types of change to taste and smell

Taste changes

There are different types of problem with taste, including:

- Ageusia: not being able to taste anything.
- **Burning mouth syndrome:** a burning or scalding sensation most often affecting the tongue. It can happen alongside other types of taste change.
- Dysgeusia (also known as parageusia): food and drink has a distorted taste. For example, something might taste bitter or metallic.
- Hypogeusia: a reduced ability to taste, so things can taste bland.
- Phantogeusia: having a taste in your mouth when you're not eating or drinking. This could be any taste from metallic to sweet.

'My favourite foods taste different now.'

Jacinta, stroke survivor

Smell changes

There are different types of smell problems, including:

- Anosmia: being unable to smell anything.
- Dysosmia a distorted sense of smell. This has two forms:
 - **1. Parosmia (also called troposmia)**: smells are distorted. They can seem different or unpleasant.
 - **2. Phantosmia:** smelling something that is not there.
- Hyperosmia: being oversensitive to smell.
- Hyposmia: a reduced ability to smell.

'My tastebuds are different. I can eat things I could not before, yet dislike some things I loved to eat. My sense of taste is heightened, very strong and bitter is now more noticeable.'

Karen, stroke survivor

Diagnosing and treating problems with taste and smell

The first thing is to find out what is causing the changes to your senses of taste and smell. If it's due to something apart from stroke, such as medication side effects or an infection, it may be possible to improve things by reviewing medication or treating the underlying cause.

Contact your GP or stroke nurse. They can give advice and treatment or can make appointments with other professionals. These can include:

- Specialist in ear, nose and throat, known as an otorhinolaryngologist or ear, nose and throat specialist (ENT).
- Dietitian to give you advice about food and eating.
- Speech and language therapist to help with swallowing problems and eating.

Your pharmacist or GP can do a medication review to check if medications are causing the problem and if anything can be done to help.

A dentist can check that your teeth and mouth are healthy.

Taste and smell tests

- A taste assessment might include tasting different liquids or dissolving taste strips on your tongue.
- A smell test involves being given a range of common odours to sniff.

These tests aim to find out if you can identify a taste or smell, and how strongly you can smell or taste.

Looking after your mouth and teeth (oral hygiene)

Some problems with taste and smell can be helped by treating the underlying cause. Tooth and gum infections can cause taste changes, so it's important to keep your mouth and teeth clean. See **page 20** for some tips for oral hygiene.

Practical changes to how you eat and drink

If you have longer-lasting problems, there are things you can do to help you enjoy your food. Over time, you may find that things improve and you start being able to identify more tastes, or regain more of the ability to smell. Read our practical tips for eating and drinking on page 17.

Smell training

Smell training is based on the idea that you can relearn smell by practising with familiar scents. Smell training involves short daily sessions where you focus on smelling a small number of different scents. You record your responses each time to track any changes or improvements in what you can smell.

Find out more about smell training

Fifth Sense is a charity dedicated to people with smell and taste disorders. Learn more about smell training and download free resources at **fifthsense.org.uk** to help you test your sense of smell at home.

Practical tips for eating and drinking



If you have any swallowing problems, always ask your speech and language therapist for advice before changing your diet.

Get advice about healthy eating

Having good nutrition and staying well hydrated is an important part of your recovery, and can help you stay healthy and reduce your risk of another stroke. Smell and taste help us make decisions about what to eat and drink. So if you're struggling to eat a healthy, balanced diet, you may need some advice from a dietitian.

There are some things you can try to make your food tastier and more appetising, without eating too much salt and sugar.

Ideas to improve your appetite

- Make your food look bright and fresh. Add colourful vegetables, such as peas to your macaroni cheese.
 Drizzle some olive oil on cooked vegetables or add some natural yogurt on top of a curry.
- Vary the texture to make things more interesting to eat. Add crunch with raw vegetables like red pepper and cucumber. Have contrasting textures like a handful of tortilla chips alongside a bowl of veggie chilli and rice.
- Arrange the food on your plate so it looks appealing to you.
- Try eating food cold or at room temperature, rather than hot. Cooling can reduce strong or sweet flavours.
- If you have a bad taste in your mouth, drink plenty of fluids such as water or low-sugar drinks. Dilute sweet drinks like squash or juice with water.
- Chewing mints or boiled sweets can help to refresh your mouth. Try sugar-free varieties.

Ideas to flavour food

- Use aromatic herbs and spices to add more flavour.
 Try herbs like tarragon, rosemary and mint, or spices like cumin, curry powder and chilli.
- Try adding toasted nuts, seeds or a squeeze of lemon juice to vegetables.
- Use pickles, chutneys or relishes. Try making them at home to reduce the salt you eat.
- When you're cooking, use flavour boosters like lowsalt stock cubes, mustard, or a small dash of Thai fish sauce or Worcestershire sauce, to add a savoury taste without too much salt.
- Olives, garlic or pesto are great with pasta dishes.

If food tastes too sweet

- Choose sharp-tasting fruits such as gooseberries, blackcurrants, grapefruit or stewed rhubarb in pies or tarts.
- Add spices to puddings, for example, nutmeg to rice pudding or custard, or ginger to stewed fruit or fresh melon.

If food tastes bitter

- Adding some sweetness, such as small amounts of honey or cinnamon, may hide bitter tastes. If you have diabetes, check with your GP first.
- If tea or coffee tastes bitter, try alternatives like fruit teas, herbal teas, hot chocolate or fruit juices.

Tips for **looking after** your **mouth** and **teeth** (oral hygiene)



If you have swallowing problems, ask your stroke nurse or speech and language therapist for individual advice about how to keep your mouth and teeth clean.



Ideally, you should brush your teeth or clean your dentures after every meal. But try to aim for at least twice a day, including before bedtime at night, for about two minutes each time.



As well as your teeth, it's important to clean your mouth and tongue. You can do this with a soft brush and toothpaste.



If you use a mouthwash, do not use it straight after brushing. It can wash away some of the fluoride left on your teeth by your toothpaste. It's better to use it at a different time to brushing.

Taste and smell changes after a stroke



Any dentures should be taken out overnight and cleaned regularly.



Avoid sugary drinks and snacks, as these will damage your teeth. If your dietitian advises you to eat sweet foods, clean your teeth carefully after eating. Food supplements can also increase your chance of developing tooth decay, so clean your teeth or rinse your mouth with water after taking them.



If you have a dry mouth due to swallowing problems or medication, ask your GP or speech and language therapist for advice. It's important to keep your mouth moist. Even if you cannot drink, you may be able to use a saliva spray or special gel to stop your mouth getting dry.



Use lip balm to stop your lips getting dry or cracked.



See your dentist regularly. They can make sure your teeth and mouth are healthy and give you any other advice you need. If you cannot get to your surgery, ask if they can visit you at home.

Where to get **help** and **information**

From the Stroke Association

Stroke Support Helpline

Our Stroke Support Helpline offers information and support for anyone affected by stroke, including family, friends and carers.

Call us on **0303 3033 100**, from a textphone **18001 0303 3033 100**

Email helpline@stroke.org.uk

Read our information

Log onto **stroke.org.uk**, where you can find easy-to-understand information, videos and an online community to support you. You can also call the Helpline to ask for printed copies of our guides.

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**



Accessible formats

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



Always get individual advice

This guide contains general information about stroke. But if you have a problem, you should get individual advice from a professional such as a GP or pharmacist. Our Helpline can also help you find support. We work very hard to give you the latest facts, but some things change. We don't control the information provided by other organisations or websites.

The Stroke Association is the only charity in the UK providing lifelong support for all stroke survivors and their families.

Contact us

We're here for you. Contact us for expert information and support by phone, email and online. Stroke Support Helpline: **0303 3033 100** From a textphone: **18001 0303 3033 100**

Email: helpline@stroke.org.uk

Website: stroke.org.uk



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