

Taste and smell changes after a **stroke**



After a stroke, you might have changes to your senses of taste and smell.

This guide can help you understand why this happens, and how to get help if you need it. Plus practical tips for stroke survivors, family and friends.

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

Useful topics include:

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

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The impact of taste and smell changes

Although taste and smell problems after a stroke can have a big impact on your life, they aren't always discussed as part of medical treatment. It may affect up to 30% of people soon after a stroke, but changes to taste and smell can and do improve. There may be some things you can do to help your recovery.

People often tell us that problems with taste and smell affect their quality of life or stop them from eating a healthy diet. It can also have an impact on your physical and emotional wellbeing, and can even affect your recovery. 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.

Smell can trigger powerful emotions such as disgust caused by the bad smell of a dirty bin, or joy from a scented flower. Smell can be part of attraction, such as your partner's perfume. Smells can give you information, such as the smell of coffee telling you that you are near a cafe.

They 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 cut off from some experiences, or give you a feeling of missing out. It can also be upsetting if your sense of taste and smell are distorted and you experience bad smells or tastes.

Taste also 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 make you feel sad or upset. On top of that, eating with other people can be an important social activity. Some people say they feel isolated if they aren't able to enjoy their food with everyone else.

Safety and hygiene

If you can't smell, you might miss some important danger warning smells such as the smell of smoke, gas, or chemicals in the air. We also use our sense of taste and smell to help us avoid food that's gone off. You might not notice your own body odour or bad smells in the kitchen, which would normally prompt you to wash or clean the room.

Impact on your health and stroke recovery

Reduced appetite

The taste and smell of food give you an appetite, and help you enjoy what you're eating. If you can't taste or smell properly, it can reduce your appetite and you might end up eating and drinking less than you need to. This can lead to losing weight, or not getting the nutrients you need. If you don't drink enough you could become dehydrated.

Being undernourished or dehydrated can make you feel tired and low, and have trouble concentrating. Infections can be more likely, and injuries can take longer to heal.

Eating too much

Some people may over-eat, perhaps because they are seeking to get more satisfaction from food when it's lacking in flavour. This can lead to weight gain, which can raise the risk of another stroke.

Seeking out certain tastes

Some people start to seek out foods with a certain taste and avoid others, perhaps because some things are very bland, or tastes are distorted. This can stop you having a balanced diet, and can lead to more health problems. For example, having more sweet food and drink can lead to weight gain and tooth decay, and having a lot 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 no flavour if you have a blocked nose.

Smell, taste and flavour

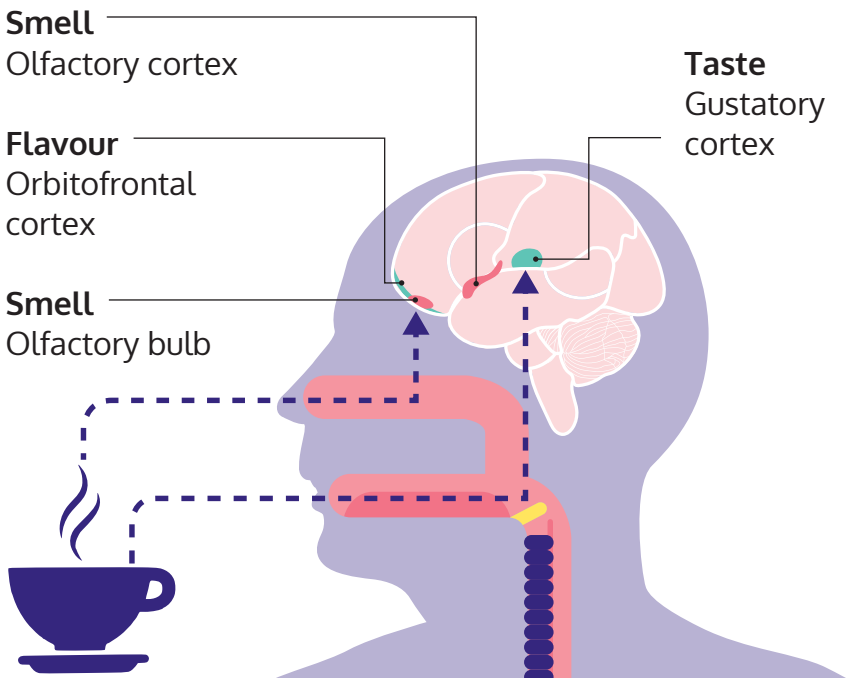
This is how your nose, tongue and brain work together to detect smells, tastes and flavours:

1. When something gives off a smell, such as coffee, it means that millions of smell particles are rising from the coffee into the air. When you breathe, the particles hit the smell receptor cells at the back of your nose. Taste works in the same way: when you eat or drink, particles hit the taste receptors on your tongue.
2. The smell and taste 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 identify flavours.
4. Areas of the brain dealing with memory, learning and emotion are also involved in smell and taste. 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.



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 include:



Medications

Some common medications can cause a bad taste, loss of smell or dry mouth. They include some medications that are 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 18** for more information.



Swallowing problems

Swallowing problems after a stroke can give you a dry mouth which 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 print copies.



Other brain conditions

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



Diabetes

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



Migraines and seizures

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



Age

Our sense of taste and smell decreases naturally with age.



Covid-19 can cause a sudden loss of smell. To get medical advice or book a test for 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.

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, and can seem different or unpleasant.
 2. **Phantosmia:** smelling something that isn't there.
- **Hyposmia:** being oversensitive to smell.
- **Hyposmia:** a reduced ability to smell.

Diagnosing and treating problems with taste and smell

The first thing is to find out what is causing the changes to your sense 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 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 ENT (ear, nose and throat specialist).
- Dietitian to give you advice about food and eating.
- Speech and language therapist to help with swallowing problems and eating.
- A medication review by your pharmacist or GP can check if medications are causing the problem, and if anything can be done to help.

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 practical suggestions 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, and find more of the ability to smell. Read our practical tips for eating and drinking below.

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 monitor any changes or improvements in what you can smell.

Find out more about smell training

Fifth Sense is a charity dedicated to people with anosmia (loss of smell). Learn more about smell training, plus free downloadable resources to help you test your sense of smell, and do the training at home fifthsense.org.uk.

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 more tasty and appetising without eating too much salt and sugar.

Ideas to improve your appetite

- Tempt your appetite by making your food look bright and fresh. Add colourful veg, such as adding some peas to your macaroni cheese. Drizzle some olive oil on cooked veg, 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, and 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, low-sugar drinks, tea and coffee.
- Dilute sweet drinks like squash or juice with water or soda.
- Chewing sweets such as 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 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 low-salt stock cubes, mustard, a 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 small amounts of honey, sweetener, or sweet spices like cinnamon may hide bitter tastes. If you have diabetes, check with your GP first.
- If tea or coffee tastes bitter, try alternatives like lemon or herbal tea, 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. Try to aim for at least twice a day if you can.



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



After cleaning your mouth and teeth, lightly rinse your mouth with some water. And if you can, use a mouthwash.



Any dentures should be taken out overnight, and cleaned regularly.

Taste and smell changes after a stroke



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 can't drink, you may be able to use a saliva spray or special gel to stop your mouth from getting dry.



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



See your dentist regularly. They can make sure that your teeth and mouth are healthy and give you any other advice you need. If you can't get to your dental surgery yourself, ask whether they can visit you at home.

Where to get help and information

From the Stroke Association

Helpline

Our 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

Get more information about stroke online at **stroke.org.uk**, or call the Helpline to ask for printed copies of our guides.

My Stroke Guide

The Stroke Association's online tool My Stroke Guide gives you free access to trusted advice, information and support 24/7. My Stroke Guide connects you to our online community, to find out how others manage their recovery.

Log on to **mystrokeguide.com** today.

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.

When stroke strikes, part of your brain shuts down. And so does a part of you. Life changes instantly and recovery is tough. But the brain can adapt. Our specialist support, research and campaigning are only possible with the courage and determination of the stroke community. With more donations and support from you, we can rebuild even more lives.

Donate or find out more at stroke.org.uk

Contact us

We're here for you. Contact us for expert information and support by phone, email and online.

Stroke Helpline: **0303 3033 100**

From a textphone: **18001 0303 3033 100**

Email: helpline@stroke.org.uk

Website: stroke.org.uk

Rebuilding lives after stroke



© Stroke Association 2021
Version 1. Published December 2021
To be reviewed: April 2024
Item code: **A01F14**

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