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# Loss of taste and smell after brain injury

## Introduction

Following a brain injury many people report that their senses of taste and/or smell have been affected. This may be as a consequence of injury to the nasal passages, damage to the nerves in the nose and mouth, or to areas of the brain itself.

Loss or changes to smell and taste are particularly common after severe brain injury or stroke and, if the effects are due to damage to the brain itself, recovery is rare. The effects are also often reported after minor head injuries and recovery in these cases is more common. If recovery does occur, it is usually within a few months of the injury and recovery after more than two years is rare.

The two senses can both be affected in a number of different ways and some definitions of the terms for the different conditions are provided below:

### ***Disorders of smell***

Anosmia	Total loss of sense of smell
Hyposmia	Partial loss of sense of smell
Hyperosmia	Enhanced sensitivity to odours
Phantosmia/Parosmia	'False' smells – Perceiving smells that aren't there
Dysosmia	Distortion in odour perception

### ***Disorders of taste***

Dysgeusia	Distortion or decrease in the sense of taste
Ageusia	Total loss of sense of taste
Dysgensia	Persistent abnormal taste
Parageusia	Perceiving a bad taste in the mouth

The two senses are connected and much of the sensation of taste is due to smell, so if the sense of smell is lost then the ability to detect flavour will be greatly affected. Therefore, a disorder of smell will usually occur together with a disorder of taste.

Sadly, there are no treatments available for loss of taste and smell, so this factsheet is designed to provide practical suggestions on how you can compensate. It provides information on health, safety and hygiene issues, suggestions to help you to maintain a healthy, balanced diet, information on psychological effects and some other issues to consider.

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## Health, safety and hygiene issues

- **Fire/smoke** - Fit a smoke alarm, have electrical appliances regularly serviced, remove plugs when not in use and use an alarm to remind you of food cooking in the oven.
- **Gas leaks** – Have gas appliances regularly serviced and fit a gas detector. You might want to consider fitting an electric cooker and fire.
- **Out-of-date food** - Always eat or throw out food by its 'use by' date. If in doubt, throw it out! Clear out the fridge and cupboards regularly.
- **Identifying products** – Try to keep products such as drinks, bleach, cleaning products and solvents in their original containers. Make sure they are clearly labelled.
- **Home hygiene** - Ask friends/family/carers to help empty rubbish bins and keep toilets and kitchen appliances clean to avoid health risks.
- **Personal hygiene** - Be aware of the need to wash yourself, your clothes and bed linen regularly. Use an antiperspirant deodorant and perhaps a shoe deodoriser too. Ask a close friend or family member to advise on any problems in this area.
- **Mouth care** – It is important to keep your mouth clean and to brush teeth regularly and thoroughly, including brushing your tongue as well. Using mouthwash and dental floss helps. It is important to pay regular visits to the dentist.
- **Toxic fumes** – Take precautions and follow manufacturers advice when using products such as paint, cleaning products and solvents. Wear a protective mask, ensure rooms are well ventilated and don't smoke.

## Tips to maintain a healthy, balanced diet

Changes to taste and smell can affect appetite and eating in a number of ways:

- The smell of food stimulates the appetite, so loss of smell can lead to reduced appetite and lack of interest in food.
- Loss of smell can also lead to a reduction in saliva production, therefore dry foods, such as biscuits and crackers, may be more difficult to eat.
- The choice of foods may be limited to those which provide flavour, which can lead to a diet that doesn't provide a balanced variety of nutrients.
- Loss of enjoyment of food can lead to avoiding eating altogether.
- Altered taste may make certain foods, such as meat, taste unpleasant and lead to those foods being avoided.

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Any of these problems may effect your choice of food and lead to an inadequate diet. It is very important to maintain a healthy, balanced diet and below are some suggestions to help you do this.

#### **Making meals more interesting:**

- Be imaginative. Use varied colours and textures.
- Under-cook vegetables so that they are crunchy. Have a crunchy base with a smooth topping.
- Try using seeds, nuts, wholegrain cereals, fresh fruit and vegetables, beans and pulses to add texture.
- Adding bacon bits or grated strong cheese, such as parmesan, can add flavour to a meal.
- Experiment with using different herbs and spices.
- Grate onions, carrots, apples or other suitable fruits and vegetables to add texture.
- Serve hot and cold foods together. Try ice cream with hot sauce/ stewed fruit or lasagne with salad.
- Make meals a social time with friends and family.
- Establish a regular routine. Try to eat breakfast, lunch, evening meals and snacks at the same time every day.
- Use a cookbook and try new and interesting recipes.

It is important to note that some of these suggestions may not be suitable if you are experiencing difficulty with chewing, swallowing or choking and have been advised to eat a softer diet. Consult your GP, Dietitian or Speech and Language Therapist for further advice.

#### **Ensuring your diet is varied and nutritious:**

A good, balanced diet is essential for good health. The Food Standards Agency's Eatwell Plate gives a pictorial guide to the five main food groups, with the proportions of each that should be included in the diet, and is available at [www.eatwell.gov.uk](http://www.eatwell.gov.uk).

All that is really required is to eat sensibly, choosing a range of foods in the correct proportions. Below are some suggestions to help you do this:

- Try to base your meals on starchy foods such as bread, cereals, potatoes, rice or pasta. Aim to include at least one food from this group in each meal.
- Try to eat as great a variety of foods as you can.
- Have at least five portions of fruit and vegetables a day.

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- Try to drink the equivalent of about a pint of milk a day. This includes milk used in tea and coffee. Try to use reduced fat milk and be very careful that milk hasn't gone off, especially in hot weather.
- Limit foods containing a lot of fat and sugar.
- If you avoid certain foods because they taste unpleasant look for alternatives sources of protein and nutrients. For example, if you cannot eat meat replace it with fish, beans, eggs or milk.

See 'Further reading and useful websites' for resources of information on eating a healthy, balanced diet, vegetarian diets and current government guidelines. In particular see *Getting the Balance Right* on the 'Food Facts' section of the British Dietetic Association website at [www.bda.uk.com](http://www.bda.uk.com).

If you continue to experience difficulty adjusting your diet or have any other dietary concerns, such as diabetes or Coeliac disease, that make it difficult to vary the foods that you eat, discuss this with your GP.

You can ask your GP or other healthcare professional for an NHS referral to a Registered Dietitian, who can assess, diagnose and treat diet and nutrition problems. Alternatively, you can find details of Registered Dietitians in private practice at [www.dietitiansunlimited.co.uk](http://www.dietitiansunlimited.co.uk). Again, for more information see the British Dietetic Association website at [www.bda.uk.com](http://www.bda.uk.com).

## **Avoiding using too much salt:**

Loss of sense of taste may make people likely to add too much salt or other flavourings, such as garlic or chillies.

To avoid using too much salt try:

- Following a recipe or routine to avoid over-salting foods during cooking.
- Try to add less salt in cooking and not to add salt at the table.
- Vegetables that are steamed, baked, roasted or cooked in the microwave retain their natural flavour better than when they are boiled. This reduces the need to add extra salt in cooking.
- To add flavour to foods try different herbs and spices, mustards, lemon juice, vinegar, pickles and sauces – follow directions for using additional flavourings and try not to add extra, as over-seasoning foods can cause indigestion.

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## Drinking:

Loss of taste and smell can also affect the amount of fluids you drink, which may result in dehydration. It is also possible to have too much caffeine or sugar in hot drinks to try to make up for an impaired sense of taste.

Government recommendations are to drink 8 glasses (totalling about 1.5 – 2.5 litres) of fluid a day. This includes all drinks such as water, juice, tea, coffee, etc, but not alcoholic drinks, as alcohol dehydrates the body. If exercising heavily you will need to drink more than this.

- Avoid very strong tea and coffee or try decaffeinated varieties.
- Avoid adding excess sugar to tea and coffee.
- Energy drinks often contain large amounts of caffeine and should only be drunk in moderation.
- Drinking plenty of liquid can help to remove unpleasant tastes from the mouth.

## Alcohol:

You may have been advised to avoid alcohol because of your brain injury or any medications you are taking. If you are unsure, ask your GP.

- Tolerance to alcohol can be reduced following brain injury. Try to drink in moderation or not at all.
- Remember that alcohol will have the same effect on you even if you cannot taste it.
- Make sure that you know what is in drinks that are bought for you.
- Try drinking low alcohol or alcohol free beers as an alternative.

## Psychological effects

Taste and smell are linked to emotional memories. A particular odour or taste, such as flowers or a favourite food, can bring happy or sad memories flooding back. Losing this capacity, along with the loss of enjoyment of food, can be a major factor in the onset of depression. It is important for carers, family members and healthcare professionals to be aware of the need for understanding and support to help people to come to terms with the effects.

Headway Groups and Branches can be an excellent source of support and provide the opportunity to talk to people with similar difficulties (see contact details in the summary at the end of the factsheet). You could also speak to your GP about any emotional difficulties and they may be able to refer you to a

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Counsellor or Clinical Psychologist. Alternatively, you can contact a Chartered Psychologist working in private practice. You can find a directory of Chartered Psychologists on the British Psychological Society website at [www.bps.org.uk](http://www.bps.org.uk).

## Other possible causes

It is worth consulting with a GP to find out whether there could be any medical reasons other than brain injury for changes to taste and smell. This is especially important if the symptoms haven't been noticed until some time after the injury.

Some medication can also affect the sense of taste. It is worth consulting the GP to see whether the symptoms could be a side effect of any medication being taken.

## Compensation claims

If a compensation claim is being made, make sure that the effects on taste and smell are covered in the claim, as they could add several thousand pounds to the money awarded.

## Summary

Brain injury can affect the senses of taste and smell in a variety of ways, which can have a significant effect on quality of life. While there are currently no effective treatments available there is some limited research ongoing, which you can find details of in 'Further reading and useful websites'.

There are strategies you can use to compensate for the sensory loss and we hope that the suggestions in this factsheet provide information you can put into practice. There may be many more ways in which altered taste and smell affect your lifestyle which aren't covered here. Remember to check any concerns you have with friends, family and your GP or other healthcare professionals.

**To discuss any issues raised here, find details of our local Groups and Branches or order copies of our booklets and factsheets, please contact the Headway helpline free of charge on 0808 800 2244 or email [helpline@headway.org.uk](mailto:helpline@headway.org.uk). You can also find Groups and Branches contact details on our website at [www.headway.org.uk](http://www.headway.org.uk).**

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## Further reading and useful websites

### Reference books

Daisley, A., Tams, R. and Kischka, U. (2009) *Head Injury: The Facts*. Oxford University Press: Oxford.

Powell, T. (1994) *Head Injury: A Practical Guide*, Speechmark Publishing Ltd: Bicester.

Wrightson, P. & Gronwall, D. (1999). *Mild Head Injury: A Guide to Management*, Oxford University Press, Oxford.

*Redeveloping Skills after Brain Injury* - Headway booklet which contains information you may find helpful.

### Web based resources

*Food Facts* – Section of the British Dietetic Association website at [www.bda.uk.com](http://www.bda.uk.com). Includes a wide range of factsheets with information on how to maintain a healthy, balanced diet. See particularly *Getting the Balance Right* and *Vegetarian Diets – Keeping a Healthy Balance*.

*Taste Changes after Stroke* – Factsheet available from the Stroke Association website at [www.stroke.org.uk](http://www.stroke.org.uk) (see ‘Useful organisations’).

<http://www.bbc.co.uk/dna/h2g2/A378632> - Section of the BBC website with information on anosmia and a discussion forum.

<http://www.cardiff.ac.uk/biosi/staffinfo/jacob/Anosmia/anosmia.html> - A resource on anosmia from Cardiff University. Contains a wealth of information on all aspects of the condition including research into treatments.

[www.eatwell.gov.uk](http://www.eatwell.gov.uk) - The Food Standards Agency’s healthy eating website. Includes the Eatwell Plate and lots of other information.

### Useful organisations

Brain and Spine Foundation

Web: [www.brainandspine.org.uk](http://www.brainandspine.org.uk)

Helpline: 0808 808 1000, Email: [helpline@brainandspine.org.uk](mailto:helpline@brainandspine.org.uk)

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British Dietetic Association

Web: [www.bda.uk.com](http://www.bda.uk.com)

Tel: 0121 200 8080, Email: [info@bda.uk.com](mailto:info@bda.uk.com)

British Psychological Society

Web: [www.bps.org.uk](http://www.bps.org.uk)

Tel: 0116 254 9568, Email: [enquiries@bps.org.uk](mailto:enquiries@bps.org.uk)

*The website has a directory of chartered psychologists in private practice.*

Dietitians Unlimited

Web: [www.dietitiansunlimited.co.uk](http://www.dietitiansunlimited.co.uk)

*A database of Registered Dietitians who work independently.*

Food Fitness

Web: [www.foodfitness.org.uk](http://www.foodfitness.org.uk)

Tel: 020 7836 2460, Email: [foodfitness@fdf.org.uk](mailto:foodfitness@fdf.org.uk)

Food and Nutrition Information Centre (USA)

Web: [fnic.nal.usda.gov](http://fnic.nal.usda.gov)

Tel: +1 (301) 504-5414, Email: [fnic@nal.usda.gov](mailto:fnic@nal.usda.gov)

Food Standards Agency

Web: [www.food.gov.uk](http://www.food.gov.uk)

Tel: 020 7276 8829, Email: [helpline@foodstandards.gsi.gov.uk](mailto:helpline@foodstandards.gsi.gov.uk)

The Smell and Taste Treatment and Research Foundation (USA)

Web: [www.scienceofsmell.com](http://www.scienceofsmell.com)

Tel: +1 (312) 938-1047, Email: [dr.hirsch@core.com](mailto:dr.hirsch@core.com)

Stroke Association

Web: [www.stroke.org.uk](http://www.stroke.org.uk)

Helpline: 0845 3033 100, Email: [info@stroke.org.uk](mailto:info@stroke.org.uk)

Tel: 020 7566 2686

The Vegetarian Society

Web: [www.vegsoc.org](http://www.vegsoc.org)

Tel: 0161 925 2000, Email: [info@vegsoc.org](mailto:info@vegsoc.org)

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