Anosmia - loss of smell
Anosmia means loss of the sense of smell, while hyposmia means reduced smell sensitivity. The olfactory neurons are able to recover or regenerate after injury. Smell sensitivity decreases with advancing age.

The exact mechanisms behind the sense of smell remain a mystery. Odour molecules in the air are breathed into the nose, and funneled inside the nasal cavity to the olfactory epithelium (tissue). This small cluster of cells, located roughly in line with the top of the cheekbones, is covered with tiny hairs ('cilia') and a thin layer of mucus. Each cell is connected to an olfactory neuron, or nerve cell. The cilia trap the inhaled odour molecules. The information on the molecules is transmitted to the olfactory neurons, then relayed via the nervous system to the brain, where the smell is processed and experienced.

'T anosmia' means the loss of the sense of smell. There are numerous medications, diseases, hormonal disturbances and chemicals that can disrupt the sense of smell, sometimes permanently. People are less sensitive to smells the older they get, and women tend to have a more acute sense of smell than men. There is some evidence that smell sensitivity may be inherited, to a degree.

'Tasting is actually smelling

It is commonly thought that the flavour of food is experienced by the 'tastebuds' on the tongue; in fact, the mouth distinguishes only rudimentary information on sweetness, saltiness, sourness and bitterness. Odour molecules from food rise to the olfactory epithelium and supplement the information from the tongue with much more sophisticated data. That's why food tastes bland when you have a head cold; the olfactory epithelium is clogged with mucus and can't function properly.

Smell adaptation

If you smell an odour for long enough, you eventually stop noticing it. This is because prolonged exposure to a strong smell is believed to saturate the olfactory epithelium with odour molecules to the point where information is no longer delivered to the brain. This is called 'adaptation'. Loss in smell sensitivity is only temporary and is particular to that 'over-smelled' odour. Recovering from adaptation depends on the individual but can range from a few seconds to a couple of minutes.

Everyday factors which diminish the sense of smell

The sense of smell can be dampened by everyday factors, including:

- **Smoking** - particularly for the half hour after smoking a cigarette.
- **Nasal mucus** - caused by a number of ailments, such as colds, influenza, hay fever or sinusitis.
- **Adaptation** - experienced when the olfactory cells are flooded to saturation point with particular odour molecules.

Factors that disrupt the sense of smell

Anosmia means loss of the sense of smell, while hyposmia means reduced smell sensitivity. Measuring the degree of 'smell loss' is difficult, since the experience of smell is subjective. Unlike other senses, there is no diagnostic test that can judge smell sensitivity with objective accuracy. However, different factors that are known to interfere with the smell sense include:

- **Chemicals** - a wide range of industrial chemicals, including heavy metals, inorganic and organic compounds, acids and pollutants.
- **Diseases of the hormonal system** - such as diabetes, Cushing's syndrome and hypothyroidism.
- **Diseases of the nervous system** - such as Alzheimer's disease, multiple sclerosis, migraine, Korsakoff syndrome, brain tumours, brain lesions and epilepsy.
- **Drugs** - stimulants (such as amphetamines and cocaine), depressants (such as morphine), some antibiotics and other drugs, including the vasoconstrictors in nasal sprays.
- **General diseases** - such as bronchial asthma, leprosy and cystic fibrosis.
- **Trauma** - including blows to the head or injuries to the nose.

Olfactory neurons can regenerate

The nerve cells servicing the olfactory epithelium are unique to the nervous system. Unlike nerve cells anywhere else in the body, the olfactory neurons are able to recover or regenerate after injury. This means that incidences of anosmia can be temporary.
Where to get help

- Your doctor
- Ear, nose and throat specialist.

Things to remember

- Anosmia means loss of the sense of smell, while hyposmia means reduced smell sensitivity.
- The olfactory neurons are able to recover or regenerate after injury.
- Smell sensitivity decreases with advancing age.

References


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More information

Ear nose and throat

The following content is displayed as Tabs. Once you have activated a link navigate to the end of the list to view its associated content. The activated link is defined as Active Tab

- Ear basics
- Ear conditions
- Hearing loss
- Nose conditions
- Throat conditions

Ear basics

- Ear problems in children
  Babes and young children are more likely to develop middle ear infections because they are still building up their immunity...
- Ear wax
  The brain uses the inner ear, the eyes and muscles to pinpoint the position of the body at all times...
- Ear wax
  In most cases, blockage of the ear canal with wax is a harmless event...

Ear conditions

- Acoustic neuroma
  In its earlier stages, an acoustic neuroma can present similar symptoms to other, less serious conditions, which may delay diagnosis and treatment...
- Benign paroxysmal positional vertigo (BPPV)
  Benign paroxysmal positional vertigo (BPPV) is a condition characterised by episodes of sudden and severe vertigo...
- Dizziness and vertigo
  Dizziness is generally treatable and rarely indicates serious brain disease...
- Ear infections
  It is estimated that around four out of five children will experience a middle ear infection at least once...
- Fars - Meniere's disease
  Meniere's disease affects the ear, which is the centre of hearing and balance...
- Fars - otosclerosis
  Otosclerosis eventually affects both ears, but the condition doesn't cause total deafness...
- Labyrinthis and vestibular neuritis
  Labyrinthis and vestibular neuritis are disorders that result in inflammation of the inner ear and the nerve connecting the inner ear to the brain...
- **Middle ear infections**
  Middle ear infections often happen during or after a child has a cold.

- **Swimmer's ear**
  Swimmer's ear can be triggered by exposure to water or mechanical damage due to overzealous cleaning.

- **Tinnitus**
  Tinnitus cannot be cured, but it can be managed with some lifestyle changes.

### Hearing loss
- **Deafness - a range of causes**
  Deafness is caused by many different events including injury, disease and genetic defects.

- **Ears - ways to protect your hearing**
  Once hearing is damaged, it often can't be restored.

- **Hearing loss - auditory neuropathy**
  Auditory neuropathy is hearing loss caused by a disruption of nerve impulses travelling from the inner ear to the brain.

- **Hearing loss - communication in the workplace**
  If you are unsure how to best communicate with a colleague who has a hearing impairment, ask them.

- **Hearing loss - how it affects people**
  Many people with hearing loss experience a drop in self-esteem and confidence because of their impaired ability to communicate.

- **Hearing loss - lipreading**
  Lipreading can help people who are hearing impaired to cope better with their hearing loss.

- **Hearing problems in children**
  The earlier that hearing loss is identified in children, the better for the child's language, learning and overall development.

- **Hearing tests**
  A ringing sensation in the ears (tinnitus), or people complaining that you talk too loudly are signs you may need to have your hearing checked.

- **Sign language - Auslan**
  Like any language, Auslan continues to evolve to meet the communication needs of people who are deaf.

### Nose conditions
- **Adenoids**
  Since adenoids are constantly in the path of germs, infections are common.

- **Anosmia - loss of smell**
  People are less sensitive to smells the older they get, and women tend to have a more acute sense of smell than men.

- **Nosebleeds**
  Bleeding from the nose is common in children and is usually not severe or serious.

- **Polyps**
  Nasal polyps can sometimes interfere with breathing.

- **Sinusitis**
  If you suffer from sinusitis, it's important to see if there is any trigger which can be treated.

### Throat conditions
- **Croup**
  Croup is a viral infection of the throat and windpipe that causes noisy breathing, a hoarse voice and a harsh, barking cough.

- **Larynx**
  Prolonged exposure to air pollutants, such as dust, can irritate the larynx and cause chronic laryngitis.
• **Rheumatic fever**
  Un-treated rheumatic fever can lead to serious complications such as rheumatic heart disease...

• **Sleep apnoea**
  A person with sleep apnoea may wake hundreds of times every night...

• **Streptococcal infection - group A**
  Streptococcal infection group A can cause sore throats (pharyngitis), scarlet fever or impetigo (school sores)...

• **Throat cancer**
  Risk factors for throat cancer include smoking and heavy alcohol consumption...

• **Tonsillitis**
  Because most attacks of tonsillitis are caused by viruses, most of the treatment is aimed at helping to relieve the symptoms...

**Related Information**

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**Related information on other websites**

• **Anosmia**

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