What is a smell?
Smell, like taste, is a chemical sense that helps us to monitor the environment. Our sense of smell is stimulated by volatile substances or odours. The responding chemoreceptor neurons in the nose pass on electrical impulses to the brain which interprets patterns in electrical activity as specific odours that we perceive and recognise as a smell.

Smell and Perception
In experiments, people who were exposed to pleasant fragrances tend to give higher ‘attractiveness ratings’ to people in photographs. Unpleasant smells can also affect our perceptions and evaluations. In one study, the presence of an unpleasant odour led people to not only give lower ratings to photographed individuals, but also to judge paintings as less professional.

Can pleasant fragrances really make us appear more attractive to other people or is it the confidence we give off that actually makes us more appealing?

Why is smell such an important part of our lives?
We use smell to sample our environment for information. We are continuously testing the quality of the air we breathe so we can be alert to potential dangers. Our sense of smell not only provides us with warnings about the environment, it plays an important role in how we recognise each other, communicate with each other, and recall memory.

Every person has their own unique smell
We can recognise and be recognised by other people just from our smell.

As children, we were able to distinguish between the smell of our siblings and other children of a similar age.

Mothers and babies can recognise each other by their own smell.
Can smells really affect your mood?

A recent experiment showed that the thought of pleasant fragrances may be enough to make us a bit more cheerful, but the actual smell can have dramatic effects in improving our mood and sense of wellbeing.

The experiment showed that the daily use of pleasant smelling fragrances can improve the mood of both middle aged men and women. ‘This personal sense of wellbeing, good humour and confidence, which will inevitably be reflected in behaviour, may help in attracting potential partners.’

Smell and Emotion Memory

The perception of smell consists not only of the sensation of the odours themselves but of the experiences and emotions associated with these sensations.

Smell sensations are relayed to a part of the brain called the cortex, where ‘cognitive’ recognition occurs. But by the time we can correctly name a particular scent as say ‘vanilla’, the scent has already activated a particular part of the brain which triggers deep-seated emotional responses.

‘Whole memories, complete with associated emotions, can be prompted by smell and this is entirely unconscious’ This key to our sense of smell lies not in the nose but much farther up the nasal passage which contains receptor cells. These are directly connected to the most ancient and primitive part of the brain, thought to be the seat of emotion - which may explain why odours can trigger deep-seated feelings and memories.’

Says professor Tim Jacobs, of the School of Biosciences at Cardiff University.

Positive and negative connotations of smell

Smells are often linked to experiences, so even pleasant smells can be associated with an unpleasant experience.

‘Simply smelling something during or before a negative experience often ties that smell to the experience, thus making it an unpleasant smell. The reaction also goes the other way - a smell is often associated with a positive experience.’

This can be a problem in surgery when people often associate their last meal with the pain or trauma of an operation. But this very effect could, in the future, be put to therapeutic advantage. If the smell were to be associated with a positive, healing experience then the smell itself can help in the rehabilitation process.

If a particular smell or fragrance brings back happy memories or makes you think about a positive time in your life, remind yourself of that smell if you’re feeling low or sad.

Reviewed by Lars-Gösta Dahlöf, associate professor from the department of Psychology at the University of Gothenburg