



# White teeth, fresh breath

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## Tooth Whitening and Bleaching

*Tooth discolouration can be a result of either extrinsic (surface stain) or intrinsic (internal stain) factors. As a general rule our teeth become darker as we become older – it is part of the normal ageing process. The deciduous or milk teeth have a much whiter appearance than their permanent successors. Many people would prefer their teeth to be whiter and so look at various whitening and bleaching options.*

### **What causes teeth to become discoloured?**

Teeth may become discoloured while they are forming (during childhood) as a result of illness or the use of tetracycline antibiotics. Teeth may also become discoloured when the pulp (nerve and blood vessels) inside the root canal dies or is damaged as a result of tooth decay or trauma. Teeth also darken naturally with age as a result of progressive hardening within the tooth or because of erosion and thinning of the enamel.

#### *Surface Stain*

Well-known causes of tooth stains are tobacco (tar), strong tea, coffee, red wine and Melanoidins (large discolouring molecules from cooked vegetable oils). Medicines containing iron and heavily coloured foodstuffs can also be a contributing influence. Deposits of tartar (calculus) that form around the necks of the teeth will also pick up unsightly stains that are extremely difficult to remove.

#### *Internal Stain*

Teeth which have had their nerve removed (dead or non-vital) will always be darker than their live (vital) counterparts. Upper front teeth (incisors) that have taken a heavy knock (trauma) will frequently become discoloured if the blood vessels have been ruptured at the end of the root (apex). If a haemorrhage (bleed) has taken place within the tooth itself (pulp

chamber) the usual bruising and healing processes of the soft tissues cannot occur. The blood products break down in the tooth and cannot be taken away by a fresh blood supply. As a result the tooth can become seriously discoloured.

### **Whitening Teeth**

Regular visits to the dentist or hygienist and proper tooth brushing are all an essential part of maintaining good oral hygiene, a healthy mouth and clean teeth.

### **What is bleaching?**

Bleaching is the use of chemical agents to produce an oxidation of the discolouring molecules within the tooth. It is not a temporary process. A dentist using chemical agents can also remove superficial stains such as tobacco, tea and coffee.

### **What does bleaching involve?**

#### *External bleaching*

Dentists can bleach teeth externally by applying a bleaching product containing peroxides (usually hydrogen peroxide or carbamide peroxide). It can either be done at the dental surgery or by the patient at home (under the dentist's direction).

At-home systems contain lower concentrations

of peroxide, usually 3.5%. Your dentist takes an impression of your teeth to produce a custom-made tray to cover the teeth to be bleached. The tray will hold the bleaching gel against the teeth with minimal contact with the gums and other oral tissues. The tray is worn for several hours, usually at night time or when it is most convenient.

A course of treatment usually takes two to three weeks. Possible side effects include minor sensitivity of the teeth to heat and cold. These symptoms are usually mild and will quickly ease when the treatment ends. If you experience any problems at all you should inform your dentist.

In-surgery systems usually involve a higher concentration of peroxide, which is used with a powerful dental light unit. Your gums need to be protected using a rubber shield or special paint-on varnish. The procedure takes from 30 minutes to an hour. This is sometimes repeated at subsequent appointments to achieve the maximum effect.

### Internal bleaching

When a tooth is discoloured following the death of the pulp, the dentist can carry out internal bleaching after the completion of root canal treatment for the tooth. The bleaching agent is sealed inside the tooth for about a week. It is cleaned out when satisfactory lightening is achieved and a tooth-coloured filling is placed inside the tooth. A very effective method is to combine internal and external bleaching.

### Internal and external bleaching

Internal and external bleaching is used to lighten dead (non vital) root-filled teeth. The procedure involves putting gel inside the tooth by holding the gel inside a mouthguard. It produces very good results.

## Does bleaching work on all discoloured teeth?

Teeth with a yellowish hue usually bleach well, brownish ones less so; greyish teeth may not bleach well at all. Discoloured fillings will not improve with bleaching. They will show more if the surrounding tooth structure is bleached and they may have to be replaced. Your dentist will be able to tell you whether bleaching is suitable for you and discuss other options such as veneers and crowns for improving the appearance of your teeth.

## What about whitening toothpastes? Can they be used instead of bleaching?

Whitening toothpastes contain ingredients that increase the effectiveness of superficial stain removal and can prove a very effective measure, if used regularly, to prevent stains gaining a foothold. However they are unable to alter the intrinsic colour of teeth. All toothpastes contain mild abrasives, which help remove surface stains.

For further dental information go to [www.dental365.com](http://www.dental365.com)

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