

Patient information

The Use of Tooth-Whitening Products in Patients Under the Age of 18

Liverpool University Dental Hospital

The use of tooth-whitening products containing or releasing greater than 0.1% Hydrogen Peroxide in patients under the age of 18 years.

Why have we written this document?

Legislation regarding the use of tooth whitening products means that the use of tooth-whitening agents containing or releasing greater than 0.1% Hydrogen Peroxide should not be used in patients under the age of 18 years.

The reason we have given you this information leaflet is because we believe that your child would benefit from the use of tooth-whitening products containing greater than 0.1% Hydrogen Peroxide for the management of their tooth discoloration as alternative options will be more destructive and will need long term maintenance.

In order for you to make an informed decision about this treatment option you need to be aware of a number of key points which are outlined below.

What is tooth whitening?

As its name suggests tooth-whitening is the process of making the colour of the teeth, especially front teeth, whiter, sometimes it is also referred to as “tooth-bleaching”. In your case it is probably more appropriate to refer to the process as tooth-lightening as we are hoping to improve the colour of a specific discoloured tooth.

Most tooth-whitening procedures are carried out in the private dental health sector and are considered a cosmetic enhancement procedure.

With regards to your tooth the reason for treatment is also to improve aesthetics but the reason for needing to do this relates to either trauma, disease or because of a developmental defect.

Tooth whitening can be achieved using Hydrogen Peroxide, which acts a bit like a bleach to remove stains and whiten colours. The bleach can be applied to just the outside of the tooth, the inside of the tooth, or both.

What is internal tooth whitening?

Internal, non-vital tooth-whitening involves placing a Hydrogen Peroxide or Hydrogen Peroxide releasing chemical inside your tooth on top of a root canal filling, which is topped with a dental filling material to seal the bleach inside the tooth. The bleaching agent is changed at regular intervals until the desired whitening result is achieved.

This treatment is only available for teeth that have discoloured as a result of death of the nerve inside the tooth, or due to treatment of a tooth that has suffered death of the nerve. It cannot be used in healthy teeth where the nerve is still alive.

What are the risks of internal tooth whitening?

The principal risk of internal tooth whitening is resorption of the tooth root; this can occur if the bleaching agent reaches the tissues surrounding the tooth. Resorption is an irreversible loss of part of the tooth root that results from bone cells dissolving the root surface.

There are no research papers that quote how likely this is to happen, however in one study that looked at all cases of this type of resorption it was found that 3.9% were due to internal tooth whitening, whilst 24.1% related to orthodontic treatment.

Internal tooth whitening has proven a highly effective treatment and conserves the tooth structure, however there is the possibility that the whitened colour of the tooth will revert back to a darker shade with time.

Are there any alternatives to improving the way my tooth looks?

There are a number of alternative treatment options that you also need to be aware of.

These are outlined below along with their risks and benefits.

- An alternative that is also conservative of the tooth structure is that of a direct composite veneer. This is where a white filling material is bonded to the front surface of the tooth to cover the discoloration.

The principal disadvantages of this are that:

- 1) It will not last forever; approximately 50% will fail and need replacing or repair over a period of seven years (this may incur financial costs in the future).
- 2) In order to successfully mask the discoloration an opaque shade of white filling material will need to be used. It can be difficult to make this look natural next to the adjacent teeth.

An alternative to an opaque material is to use an additional bulk of material and increase the thickness; however this too can make the tooth look unnatural.

- The final option/alternative is to place either a porcelain veneer or three-quarter crown to cover the discoloration in the tooth. This option is usually not advisable in patients under the age of 16 years due to changes to where the gum meets the tooth that occur up to and slightly beyond this age. This technique requires removal of tooth structure that can never be replaced other than with a veneer or crown.

A veneer preparation typically removes between 3% and 30% of total tooth crown structure (more for a three-quarter crown). A porcelain veneer will usually require replacing approximately every ten years, they are not as easily repaired as a direct composite veneer and will always need to be in place to give an acceptable appearance. The cost of replacing the veneer should be factored in to your considerations.

Please be aware that in paediatric dental patients we would not normally recommend this treatment but it is included here so you are aware of all the possible treatment options, both now and in the future.

Why are we recommending internal tooth whitening to improve the colour of your child's tooth despite restrictions in the law?

We consider that in your child's case the option of internal tooth-whitening is in their best interests as it is conservative of the tooth, requires minimal maintenance and if further treatment is required in the future the structural integrity of the tooth is preserved.

The use of tooth-whitening products in under 18 year olds by dentists to improve the appearance of discoloured teeth has long been considered safe and there is no scientific basis for not providing this treatment to this age group.

We, as a department, feel we have an ethical duty to offer this to you and your child as a treatment option as we feel it is in your child's best interests to receive this treatment over the alternatives.

What other types of tooth-whitening are there and what risks are involved with these?

External, night guard, vital bleaching: This treatment involves application of a suitable bleaching agent to the outside surfaces of the tooth only. The bleach is held against the teeth using a custom made bleaching tray that fits over the teeth and is usually left in place overnight or for an alternatively suitable period of time. The treatment is repeated until the desired affect has been achieved.

Risks include soreness of the gums but the most frequently reported side-effect is tooth sensitivity. If sensitivity occurs then the frequency of bleaching should be reduced and use of desensitising toothpaste may also be beneficial. The benefits of this treatment are that it can be used to treat multiple teeth simultaneously; this may be beneficial in the treatment of some enamel defects.

Inside-Outside Bleaching: This treatment combines the principles of internal and external bleaching and involves applying a suitable bleaching product to the inside and outside of a single tooth at the same time. As with internal bleaching the tooth needs to have had root treatment completed before bleaching can commence. A small hole is left in the back of the tooth to allow bleach to contact the inside of the tooth and a custom tray used to retain bleach over the inside and outside of the tooth at the same time, hence the name.

The risks represent a combination of those for internal and external bleaching. The benefits of this treatment is that it is a belt and braces approach to whitening the tooth and affects both internal and external causes of tooth discolouration. As with external bleaching additional teeth may also be treated either side of the discoloured tooth.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

Paediatric Dentistry Department

Tel: 0151 706 2000 Ext 5022

Text phone number: 18001 0151 706 2000 Ext 5022

Author: Liverpool University Dental Hospital

Review date: March 2026

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

يمكن توفير جميع المعلومات المتعلقة بالمرضى الموافق عليهم من قبل انتمان المستشفى عند الطلب بصيغ أخرى، بما في ذلك لغات أخرى وبطرق تسهل قراءتها وبالحروف الطباعية الكبيرة وبالصوت وبطريقة برايل للمكفوفين وبطريقة مون والكترونياً.

所有經信托基金批准的患者資訊均可以其它格式提供，包括其它語言、易讀閱讀軟件、大字

體、音頻、盲文、穆恩體 (Moon) 盲文和電子格式，敬請索取。

در صورت تمایل می‌توانید کلیه اطلاعات تصویب شده توسط اتحادیه در رابطه با بیماران را به اشکال مختلف در دسترس داشته باشید، از جمله به زبانهای دیگر، به زبان ساده، چاپ درشت، صوت، خط مخصوص کوران، مون و بصورت روی خطی موجود است.

زانیاری پینوهندیدار یو نهخوشانه‌ی له‌لایمن تراسته‌وه پهمه‌ند کراون، نه‌گس داوا بکریت له فورماته‌کانی تردا بریتی له زمانه‌کانی تر، نیزی رید (هاسان خویندنه‌وه)، چاپی گهوره، شریتی دهنگ، هیلای موون و هیلایکترونیکي همیه.

所有經信托基金批准的患者信息均可以其它格式提供，包括其它语言、易读阅读软件、大字
体、音频、盲文、穆恩体 (Moon) 盲文和电子格式，敬请索取。

Dhammaan warbixinta bukaanleyda ee Ururka ee la oggol yahay waxaa marka la codsado lagu heli karaa nuskhado kale, sida luqado kale, akhris fudud, far waaweyn, dhegeysi, farta braille ee dadka indhaha la', Moon iyo nidaam eletaroonig ah.