

To bleach or not to bleach

USING A NUMBER OF CLINICAL CASES AS EXAMPLES, LINDA GREENWALL DESCRIBES CIRCUMSTANCES WHEN BLEACHING IS AND IS NOT A SUITABLE COURSE OF ACTION



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Everyone wants to have whiter teeth, which in our appearance conscious society are associated with health, youth and beauty. Does that mean that every patient can have bleaching treatment to whiten teeth? For many, bleaching is an appropriate, simple and conservative treatment with the alternatives involving more invasive options such as porcelain laminate veneers and crowns. However, bleaching may not be appropriate for everybody. This article aims to show the careful case selection required prior to providing bleaching, and to highlight a range of situations where bleaching is an appropriate course of treatment.

INDICATIONS

Mild generalised staining

Figure 1 shows a patient with an age yellowing smile. The yellow is intrinsic staining. Although the patient has many enamel cracks on the teeth, he should respond favourably to home bleaching. He has extrinsic staining on the teeth from coffee drinking. The teeth are basically sound and there are no anterior restorations.

Mild tetracycline staining

The patient in Figure 2 took minocycline for acne for three years during his early 20s. This caused mild banding and staining on his teeth.

Many doctors are unaware that minocycline can cause staining in adult patients. This type of staining will respond to bleaching, but the patient needs to be informed that it will take much longer to bleach the teeth

and the colour change will be slower. Patients need to wear home trays for longer and sleep with them, if possible.

Pulpal trauma

The patient in Figure 3 had a sports accident and buccally displaced the upper right central tooth. It was repositioned and required a root canal treatment.

This type of trauma can lead to cervical resorption. However, the patient had a combination of staining on the teeth. The brown/white discolouration is mild fluorosis staining. This type of staining would respond well to home bleaching in a tray, while the access cavity could be left open to do an 'outside/inside bleaching', which is a new technique described by Hayward (1999). A lower concentration of peroxide could be used to ensure less chance of cervical resorption.

Pulp necrosis

Figure 4 shows a patient with nonvital staining with mild tetracycline staining. This patient would respond well to the 'walk in bleach technique' for the upper right central, but would benefit from bleaching of all his teeth. Treatment planning and sequencing need to be carefully discussed with the patient.

CONTRAINDICATIONS

Moderate to severe tetracycline staining

The patient in Figure 5 has severe tetracycline staining, which was treated by

crowning the upper teeth with porcelain bonded metal crowns. This was done 20 years ago. These days, porcelain veneers would probably have been made. The amount of discolouration is too severe to bleach the teeth, although a degree of lightening may be achieved.

Discolouration in the adolescent patient

Figure 6 shows a thirteen-year-old boy who had to have his braces removed due to tooth decay. These brown discoloured areas may not bleach due to the cause of discolouration. It would not be advisable to bleach the patient's teeth as he is too young. At a later stage, when the patient is about 16 or 17, it may be possible to try home bleaching and the microabrasion technique.

Teeth with inadequate or defective restorations

Figure 7 shows a patient with defective restorations on the upper right central incisor. However, there is insufficient enamel for undertaking the bleaching techniques and this would not achieve a predictable result. It would be more appropriate to replace the defective restorations and crown or veneer these teeth.

Mottled and defective enamel

The patient in Figure 8 has insufficient enamel for bleaching and therefore in this case it should not be undertaken. Although she has had to have all her posterior teeth crowned because the

INDICATIONS FOR BLEACHING



Figure 1: Mild generalised staining caused by a number of factors



Figure 2: Mild tetracycline staining



Figure 3: Pulpal trauma after damage done to the upper right central tooth



Figure 4: Nonvital staining with mild tetracycline staining

INDICATIONS

- Colour change related to pulpal trauma or necrosis
- Patients who require a minimal amount of dental treatment to achieve a colour change
- Young patients with an inherited grey or yellow hue to their teeth who are unhappy about this

enamel is weak and defective, she does not wish to have any treatment on the front teeth. She may have a form of *amelogenesis imperfecta*. Preferable treatment options would include either placing porcelain veneers or crowning these anterior teeth.

Tooth surface loss

Figure 9 shows the teeth of a patient who purchased an over-the-counter bleaching kit and

tried it for several weeks. This inappropriate self-prescription for bleaching the teeth is the exact reason for the controversy with the over-the-counter products. As there is a middle band of erosion on the central incisors, bleaching the teeth is contraindicated.

Enamel hypoplasia

Although this is not strictly a contraindication to bleaching teeth, the patient in Figure 10 may be better treated using the microabrasion technique. This patient should be warned that when bleaching is undertaken, the white areas will get whiter and an uneven appearance will be created. Initially, however, as the teeth lighten, the difference will become less noticeable.

Uneven banding on the teeth

Although bleaching can be

undertaken for the patient in Figure 11, he should be warned that after the first few bleaching sessions banding might occur on the teeth. There are thin white horizontal lines on the teeth. These will show up more unevenly and the patient may be alarmed and discontinue the home bleaching if this is not mentioned before treatment commences.

This patient has a nonvital upper right lateral tooth. This case would be ideally to treated using the external/ internal technique where the palatal access cavity is reopened, the gutta percha sealed to create a barrier and a small cotton wool is then left in this chamber. The patient then uses the bleaching trays to bleach the outside and the inside of the upper lateral tooth as well as the upper anterior teeth. [ID](#)

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Figure 5: Severe tetracycline staining



Figure 6: Adolescent discolouring



Figure 7: Defective restoration on upper right central incisor

CONTRAINDICATIONS

- Moderate to severe tetracycline staining
- Severe hypoplasia
- Severe fluorosis staining
- Discolourations in adolescents with large pulps (Haywood 1995)
- Those with unrealistic expectations about the aesthetic result
- Where a change in hue rather than a change in chroma is required
- Teeth with inadequate/defective restorations
- Teeth with insufficient enamel
- Tooth large anterior restorations
- Tooth surface loss due to attrition, abrasion and erosion
- Teeth with pathology such as periapical radiolucency
- Patients with a lack of compliance through inability or unwillingness to wear the appliance for the required period of time (Garber et al 1991)
- Patients who smoke - bleaching may enhance the cariogenic effect of smoking
- Patients with extreme sensitivity to hot, cold and sweet. Although this is not strictly a contraindication, bleaching can cause transient sensitivity. It may be better to treat this first with bonding or fluoride applications

CONTRAINDICATIONS FOR BLEACHING



Figure 8: Teeth with insufficient enamel for bleaching



Figure 9: Teeth after several weeks of using over-the-counter bleaching



Figure 10: Enamel hypoplasia



Figure 11: Teeth with uneven banding