

# Bleaching? Every one is different

Diane Rochford considers the exciting treatment option of tooth whitening and presents three patient case studies to illustrate how different it can be

**D**ental bleaching is an exciting treatment option dental hygienists and therapists are able to provide for their patients with a prescription from a registered dentist.

Patients frequently ask about 'whitening their teeth'. However, not all patients are able to just whiten their teeth, other factors may effect the outcome of treatment and provide us as clinicians with challenges along the way.

The three case studies I will introduce you to are all patients I have worked with, and learnt from as I provided the prescribed treatment.

All patients had prescriptions by a registered dentist; treatment plans, and consented to treatment before proceeding.

## Case Study 1 – Tetracycline (46-year-old female)

Tetracyclines are a broad spectrum antibiotics, used to treat various infections. Minocycline is frequently prescribed for acne and other skin conditions.

They are commonly associated with causing intrinsic staining of teeth, this can be generalised or localised, in the form of horizontal banding, and can vary in colour – grey, blue, yellow and brown. The intensity and pattern can depend upon the dosage, duration and type prescribed in relation to the development of the tooth.

In the past, bleaching techniques were not



Figure 1: Beginning of treatment – starting shade C2/C3



Figure 2: Review appointment, after three weeks of bleaching just the upper teeth. Current shade A1. Gingival Margins A2/C2



Figures 3 and 4: Five months since the beginning of treatment, upper teeth A1 and lowers A2. The patient was very happy with the results



Figures 5 and 6: One year since completing the initial treatment. The patient is still very happy with the shade of her teeth, and commented at her hygiene visit, that she is proud of what has been accomplished and takes great pride in looking after her gums and teeth



**Diane Rochford** has been working in dentistry for more than 20 years. First, as a dental nurse, before qualifying as a dental hygienist from Guy's Hospital, London in 1996. She was awarded the Hu-Friedy Scaling prize. Diane joined Dr Linda Greenwall's team in September 1996. Diane has lectured on the hygiene programme at World Aesthetic Congress (WAC) in 2006, to the London Region British Dental Hygienist Association in 2007; Croatia in 2009 and was a speaker at WAC in June 2011. Diane assists with teaching on Dr Greenwall's dental bleaching courses and is currently teaching her own courses specifically for dental hygienists and therapists on the subject. Diane is a gold member of the British Dental Bleaching Society, current member of BSDHT and BPS. Diane is also a clinical coach for Jameson Management in the UK, and attends Michael Wise's Hygiene Study Group.

considered successful options for improving the appearance, dentist preferring to crown or veneer Tetracycline-stained teeth. Many successful studies have been carried out, the research showing that with the extended (3-6 months) use of 10% Carbamide peroxide in trays, patients could achieve good results.

This patient enquired, during her new patient hygiene visit about 'whitening' her teeth. She had been unhappy with the shade for many years and was very much aware of the staining caused by Minocycline.

Options for treatment, both in-office and home bleaching were discussed along with the



benefits and risks. Home bleaching would be the preferred option, for lightening tetracycline stained teeth.

Using a mirror, the patient was shown the banding on her teeth, current shade and areas of recession. The day-to-day procedure of home bleaching was discussed and the patient's commitment to help achieve the best possible result.

Fees are usually higher for prolonged bleaching cases, than a basic home bleaching case, due to the extra bleaching gel and review appointments required. 10% Carbamide peroxide was used throughout the treatment, a variety of desensitising products were also given for the patient to use.

### Conclusion

Home bleaching over an extended period of time, using 10% carbamide peroxide is a conservative, cost effective treatment to attaining a more acceptable social and aesthetic appearance.

### Case study 2 – Sensitivity (56-year-old female)

Sensitivity is a common side effect of dental bleaching, the most common reason patients stop bleaching.

There is no way to know which patients will be sensitive during treatment.

More recent studies have shown that sensitivity is caused by the peroxide penetrating the pulp causing a reversible pulpitis. This is evident as patients with teeth in excellent condition – no cracks, exposed dentine or deep restorations may still experience severe sensitivity.

Sensitivity can be treated in two ways. Passively, by altering the bleaching time, frequency and concentration of the gel.

Active treatment involves the use of desensitisers, such as fluoride, occludes the dentinal tubules. Potassium nitrate, calms the nerves. Amorphous calcium phosphate replaces the calcium and phosphate back into the tooth.

When this patient attended for her three-monthly hygiene visit, she proceeded to inform me that she had tried to whiten her teeth in the past, but was very disappointed because she had experienced severe sensitivity and had stopped.

After reassuring the patient we could help her to continue to bleach her teeth, both passive and active treatment was provided.

The patient returned to the practice with her bleaching trays and the gel she had been prescribed, she had both 10% carbamide peroxide and 7.5% hydrogen peroxide.

Active phase of treatment involved applying



Figure 7: Beginning of the treatment, patient was shown the areas of recession and exposed dentine and incisal wear on the lower anteriors



Figure 8: Completing bleaching of the upper teeth. The patient reported she had experienced some sensitivity, however, she was able to manage it with the desensitising products and wearing the trays for a shorter time



Figure 9: Beginning of treatment. Shade A2/A3



Figure 10: After treatment

a desensitising solution onto the sensitive teeth, primarily the lower right buccal surfaces. Desensitising toothpastes for using when brushing and also topical application for specific areas, along with a desensitising gel to apply to her trays and wear for one hour during the day.

The patient's trays were checked that they fitted correctly, so as not cause any gingival irritation.

Applying the correct amount of gel to the trays was demonstrated, something not previously shown. The patient was then instructed to start by bleaching just the upper teeth with 10% carbamide peroxide, for one hour each day and slowly increasing the duration if she felt confident to do so, and not experiencing severe sensitivity.

Frequent review appointments were scheduled to track the patients progression, as this treatment could take sometime to complete successfully.

### Conclusion

Sensitivity during bleaching can be managed by the patient, so long as they are fully informed of what to expect and a protocol is put in place for them to follow, during their treatment.

### Case study 3 (basic bleaching)

Not all patients present us with challenges, and this case was a basic A3 shade to A1/B1 shade. Successful treatment of these types of patients can still be rewarding, promote good feeling in the practice and provide referrals.

This young patient enquired at her six-

monthly hygiene visit about 'whitening' her teeth. I had just successfully completed treatment for both her mother and sister, and she wanted to see if her teeth could be as white as theirs.

Even though the patient was aware of the procedure – and what was expected of her to complete the treatment – it is still our duty of care to fully explain the treatment options available, the daily procedure and the benefits and risks. Everyone is different.

### Conclusion

Providing patients with clear and concise instructions of the day-to-day procedure and what to expect during the initial discussion and treatment planning phase, and frequent review appointments will lead to successful completion of the treatment. **DH&T**

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