“The tooth’s response to bleaching is individualistic and can only be determined by starting treatment”

Interview with Prof. Van B. Haywood, USA

Prof. Haywood: Tooth sensitivity is the single most significant deterrent to the very popular dental bleaching. How well do we understand this condition?

Claudia Salwiczek: Tooth sensitivity is the single most significant deterrent to the very popular dental bleaching. How well do we understand this condition?

Sensitivity may be treated actively or passively, but at-home treatment is most desirable. Passive treatment involves reducing the frequency of application or the duration of application, or interrupting continuous application. Active treatment involves using a material with potassium nitrate instead of bleaching material in the tray for 10 to 50 minutes when needed, and pre-brushing with potassium nitrate toothpaste for two weeks before bleaching to reduce the sensitivity. Patients must be counselled on the frequency of application and the appropriate concentration of bleaching agent. They need to be aware that applications more than once a day or higher concentrations of bleaching agent can increase the liability of sensitivity. Patients with pre-existing tooth sensitivity must be cautioned that increased sensitivity, albeit transitory, may occur and that management of the sensitivity may require a longer time span for healing as a result of the additional time to treat the sensitivity.

What treatment objectives are available?

No bleaching treatment should be initiated without a proper dental examination, which generally includes radiographs and determines a diagnosis for the cause of the discoloration. The examination should include an explanation to the patient of all their treatment options, considering existing restorations—which will not bleach—and other aesthetic options. It should be noted that there are several causes of discoloration (abscessed teeth, caries, internal or external resorption) for which bleaching will mask the indication of pathology but not resolve the problem. Other treatments will be required before or instead of bleaching. Before bleaching can also minimise patients’ perceived pain responses.

How effective are the desensitising toothpastes available on the market, and how do they work?

The most common, professionally endorsed, self-applied approach to treating sensitive teeth is the use of desensitising toothpastes, which contain potassium salt (nitrate or chloride). Potassium ions pass easily through the enamel and dentine to the pulp in a matter of minutes. Potassium is believed to act by interfering with the transmission of the stimuli, by depolarising the nerve surrounding the odontoblast process. Most potassium-base desensitising toothpastes also contain fluoride for cavity protection, and some offer an array of flavours and the whitening, tartar-control, and baking soda benefits found in most regular toothpastes.

In clinical trials, the desensitising effect of brushing with anti-sensitivity toothpaste generally takes about two weeks of application twice per day to show reduction in sensitivity, and greater effect developed with continued use. The patient should be advised in accordance with the manufacturer’s instructions, typically to be applied by brushing twice daily as a part of the regular oral hygiene regime.