

# Bleaching causes Dental Hypersensitivity

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## Editorial

Over the last ten years, there has been an upsurge in demand for aesthetic dentistry in the dental sector. According to certain famous publications, whiter teeth make people's smiles more appealing and boost their self-esteem. This explains why, according to a recent survey, nearly 89 percent of participants wanted their teeth whitened. Dental bleaching is currently offered in two forms: at-home whitening and in-office bleaching, both of which require the supervision of a dentist. Both approaches have been shown to be safe and effective in research.

When performing whitening operations, dentists still have to deal with the unfavourable side effect of tooth sensitivity. Unfortunately, this is a pretty common adverse effect. According to studies, bleaching-induced TS affect 67% to 100% who have in-office bleaching and 37% to 90% who bleach at home. Recently, more exact estimations were released. Those authors found that the risk of TS for in-office bleaching with 35% hydrogen peroxide 62.9%; 95% confidence interval and at-home bleaching with 10% to 16% carbamide peroxide were quite similar after analysing individual patient data from 11 clinical trials involving bleaching.

The strength of TS, on the other hand, varied greatly amongst the bleaching methods. The total mean severity of bleaching-induced TS for in-office bleaching was 2.8 to 2.9, whereas at-home bleaching patients reported a sensitivity of 0.5 to 0.9.19 on a scale of 0 no pain to 4 extremely strong pain. As a result, the at-home approach is the most commonly suggested bleaching method. Because of the occurrence of TS, several researchers are looking for ways to reduce or even eliminate bleaching-induced TS.

Recently tested methods include lowering the bleaching product's concentration and usage duration, using topical desensitising agents while bleaching, and providing systemic drugs. For both at-home and in-office bleaching, topical use of desensitising chemicals appears to be a good technique for decreasing TS. Some manufacturers have included desensitising compounds, such as potassium nitrate and sodium fluoride, into the bleaching formulation to avoid the unnecessary step of using a desensitising gel, in order to shorten application time.

Only a few researches have looked at the efficiency of desensitizer-

containing bleaching gels in minimising bleaching-induced TS, and the results are mixed. When desensitizer-containing gels were employed, some authors found a decrease in bleaching-induced TS, whereas others reported no significant difference between desensitizer-containing and desensitizer-free bleaching gels. Tooth sensitivity caused by bleaching is the most prevalent clinical side effect of the operation. However, the stated risk of getting TS varies widely; the highest risk is commonly observed in in-office tooth whitening, which has a reported risk of 60% to 98%. The greater concentration of hydrogen peroxide in the in-office bleaching chemical might explain this. Although the pain and discomfort caused by bleaching-induced TS is usually minor and temporary, it can be severe and bothersome on rare occasions.

Bleaching-induced TS has been linked to the transfer of hydrogen peroxide through enamel and dentin to the pulp, where it causes an inflammatory reaction and may directly activate pain neurons, according to researchers. To counteract this negative effect, certain measures have been taken. Selected anti-inflammatory medications, such as ibuprofen and ascorbic acid, did not lower the risk or severity of bleaching-induced TS [1-5].

## Conflict of interest

None

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