

# PREVENTIVE DENTISTRY

## Reminders to perform oral hygiene



### BACKGROUND

Effective oral hygiene is an essential part of orthodontic treatment, yet it can be difficult to achieve because of the appliances used to achieve a harmonious arrangement of the teeth. Plaque can increase, patients can experience gingival irritation, and white spot lesions can develop if the teeth and supporting structures are not maintained during orthodontic care. Reminder therapy has been effective in improving the results of treatment in various health fields. The influence of reminder therapy on plaque index, gingival index, and white spot lesion development in patients undergoing orthodontic treatment was investigated via a systematic review of the literature and meta-analysis of the evidence presented there.

### METHODS

The databases searched included LILACS, PubMed, SciELO, Scopus, Web of Science, EMBASE, LIVIVO, Cochrane Library, OpenThesis, and OpenGrey. Seven articles met the inclusion criteria and were analyzed.

### RESULTS

The 574 subjects had a mean age of 12.8 to 18.7 years in the 7 studies, with female subjects in the majority in all but 1 of the reviews, which did not indicate gender ratios. All patients were given hygiene instructions through videos or lectures at the first visit. For the reminders, 3 studies used exclusively text messaging, 1 compared text messages and phone calls, one sent the reminders via notification through an app, and 2 associated text messaging with videos, voice messages, and scientific articles. The reminders were sent only to the parents/guardians in 2 studies, 4 studies sent them only to the patients, and 1 sent reminders to patients older than 18 years but only to guardians for patients under age 18 years.

Six studies had a low risk of bias. One had a moderate risk of bias. Overall, the evidence collected was considered to be of high quality.

All studies performed evaluations of plaque, gingival status, and white spot lesions at baseline and used control and experimental groups. Four studies presented sufficient data for quantitative analysis. Major differences were noted between the oral hygiene and oral clinical

condition in the control and experimental groups. The experimental groups had lower scores for the plaque and gingival indexes and fewer white spot lesions than the control groups.

### DISCUSSION

Orthodontic accessories can make it difficult to maintain sufficient oral hygiene, but optimal oral health maintenance is essential during orthodontic care. Sending reminders to reinforce the need for oral hygiene via text, video, or voice messages achieved the goal of improving patients' oral health status as determined by their plaque index, gingival index, and white spot lesion development.

#### Clinical Significance

Reminder therapy appears to be a valuable tool in helping young patients maintain good oral health during orthodontic treatment. Often these patients can become less motivated during the middle stretch of treatment, allowing themselves to slack off in relation to oral hygiene activities. Sending reminder messages via a smartphone is an easy way to touch base with patients and keep them motivated and aware of the importance of performing good oral hygiene. Parents or guardians can also be alerted to check with their younger offspring to ensure that proper measures are being taken to reduce plaque and avoid gingival irritation and white spot lesion development.

Lima IFP, Vieira WA, Bernardino IM, et al: Influence of reminder therapy for controlling bacterial plaque in patients undergoing orthodontic treatment: A systematic review and meta-analysis. *Angle Orthod* 88:483-493, 2018

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