

# Periodontal health in patients with orthodontic retainers

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# Introduction

- A majority of the population including both adults and children seek orthodontic treatment because of an ever-increasing concern for dentofacial esthetics. Orthodontic treatment is completed by resultant bone turnover so as to move teeth within the alveolus. Since the bony response is facilitated by the periodontal ligament, movement of a tooth is primarily a periodontal ligament phenomenon and requires a healthy periodontium



- Before any orthodontic treatment, the orthodontist must do a thorough clinical examination that should include assessment of the gingival status, probing depths, mobility, keratinized gingival width, and recession. Examiner must make sure that there is adequate oral hygiene maintenance by the patient and there is no periodontal breakdown. In patients with presence of plaque or gingival inflammation, adequate oral prophylaxis should be done, and the patient should be educated and motivated regarding oral hygiene maintenance throughout the orthodontic treatment.

# Fixed lingual orthodontic retainers

- Different orthodontic appliances can cause periodontal inflammation.
- Fixed retainers, most commonly used orthodontic appliance to stabilize dental elements after orthodontic treatment can influence on the periodontal health, too.



- The plaque-retaining appliances such as orthodontic retainers may cause inflammation and periodontal disease.
- Post orthodontic treatment completion, regular recall appointments help in timely detection of aggressive periodontitis in young adults and adolescents.
- As a part of the follow-up, patients are advised for regular periodontal examination along with radiographic evaluation every year.

# AIM

- The main aim of this study was to make assessment periodontal tissue health status on lower incisors of patients with fixed mandibular retainers using objective periodontal indexes.



# Material and method

- Total numbers of 60 subjects, 30 male and 30 female patients with fixed mandibular retainers were included in this study.
- Before placing the retainer, an oral hygiene session and adequate periodontal treatment (if there was need) were performed on all patients.
- All the subjects were investigated after 3, 6 and 12 months.
- Plaque index by Silness & Loe; Gingival index (GI) by Loe & Silness, probing depth, clinical loss of attachment and the presence of gingival recession were assessed on the six inferior frontal teeth.



# Results

	after 3 month	after 6 months	after 12 months
Plaque index	<b>1.04±0.27</b>	<b>1.28±0.19</b>	<b>1.55±0.22</b>

	after 3 month	after 6 months	after 12 months
Gingival index	<b>1.12±0.32</b>	<b>1.36±0.39</b>	<b>1.74±0.44</b>

Periodontal sockets and presence of gingival recession were found in just one patient (1.66 % form all subjects) in all three examined periods.

# Statistic analysis

- In our study was found a statistically significant difference for the Plaque Indexes ( $P > 0.05$ ) in both groups, with higher scores among subjects having retainers for 12 months.
- These results are similar to those for the gingival index.



# Conclusion

- From the results obtained in this study, it can be concluded that for a period from 3, 6 to 12 months, even there are effects of the orthodontic retainers on the periodontal health, they are minimal.



**THANKS FOR YOUR ATTENTION**