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[\[PDF \(722K\)\]](#) [\[References\]](#)**Influence of a denture strengthener on the deformation of a maxillary complete denture**[Yuki HIRAJIMA](#)<sup>1)</sup>, [Hidekazu TAKAHASHI](#)<sup>2)</sup> and [Shunsuke MINAKUCHI](#)<sup>1)</sup>

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**Abstract:**

The present study investigated the influences of a denture strengthener on the deformation of a maxillary complete denture. Three groups of maxillary complete dentures were fabricated (Group 1 without a strengthener; Group 2 with a Co-Cr alloy wire strengthener; Group 3 with an experimental fiberglass strengthener). The denture deformation during occlusal load was monitored using four rosette strain gauges. The maximum principle strain (MPS) of each gauge, except for that at the labial frenum, increased proportionally with the increase of the applied load. The MPS at the incisive papilla (IP) was consistently the highest among the measuring positions regardless of the denture types. The MPS at IP in Group 1 was significantly higher than those in Groups 2 and 3 when the applied load was equal ( $p < 0.05$ ). These results suggested that the strengthener in the acrylic maxillary complete denture would reduce deformation of the denture during occlusal loading.

**Key words:**[Denture strengthener](#), [Deformation](#), [Fiberglass](#)[\[PDF \(722K\)\]](#) [\[References\]](#)

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