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[\[PDF \(2442K\)\]](#) [\[References\]](#)**Photoelastic stress analysis of different post and core restoration methods**[Masahiro YAMAMOTO](#)<sup>1)</sup>, [Hiroyuki MIURA](#)<sup>1)</sup>, [Daizo OKADA](#)<sup>1)</sup>, [Wataru KOMADA](#)<sup>1)</sup>  
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**Abstract:**

The aim of this study was to compare three types of post and core systems by analyzing the stress magnitude within the root. To this end, two-dimensional photoelastic simulation models of endodontically treated maxillary central incisors were fabricated. Three different types of post and core systems were selected for this study: composite resin post and core, composite resin core in combination with a glass fiber post, and conventional cast metal post and core. The fabricated models were observed in a transmission polariscope with the same loading force (400 N) on 45° palatal direction and the fringe orders registered were thereby analyzed. Results obtained in this study suggested that abutment build-up using composite resin core in combination with a glass fiber post model produced the lowest stress concentration and is hence effective in preventing stress concentration in the case of restored endodontically treated teeth.

**Key words:**[Photoelastic](#), [Post and core](#), [Fiber post](#)[\[PDF \(2442K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)

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