

Influence of test parameters on in vitro fracture resistance of post-endodontic restorations: a structured review.

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A structured literature review aimed to elucidate test parameters for in vitro testing of post-endodontic restorations. The literature was digitally searched using MEDLINE, EMBASE, MedPilot and an additional hand search was performed. Two independent researchers assessed the articles in relation to the defined inclusion and exclusion criteria. The literature search revealed 125 abstracts. Sixty-nine studies were included. Fifty-seven per cent of the studies investigated maxillary incisors only. The restorative stage as complex of tooth, post, core, and crown and post-and-core restored specimens without crowns were used most frequently. Fifty-nine per cent of the studies used static loading. Only 15% of the studies performed thermocycling and mechanical loading (TCML). However, the number of thermo- and load cycles varied. The cross-head speed of linear loading after TCML ranged from 0.01 to 150 mm min⁽⁻¹⁾. The reviewed studies were heterogeneous in test design regarding the used test parameters. A methodological standardization of in vitro testing of post-endodontic restorations is recommended.

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