

Efficacy of denture disinfection methods in controlling *Candida albicans* colonization in vitro.

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OBJECTIVE: The aim of this study was to rank 10 denture disinfection methods according to their efficacy in reducing *Candida albicans* (*C. albicans*) colonization on soft denture relining material. **MATERIAL AND METHODS:** Circular specimens (diameter 8 mm) were made of soft denture relining material (Mucopren E, Kettenbach) and thermally aged. Specimens were incubated with *C. albicans* (strain 1386, DSMZ) followed by 1 of 10 disinfection procedures (6 soaks, 2 microwave irradiation regimes, 1 effervescent commercial cleansing product, and denture left dry overnight). Incubation with phosphate buffered saline (PBS) served as a control. Adhering fungi were quantified using a bioluminometric assay in combination with an automated plate reader for cell quantification. Scanning electron micrographs (SEMs) were made for validation. **RESULTS:** Low median luminescence intensities indicated the presence of a few viable fungi after the soaking of specimens in sodium hypochlorite (10 relative luminescence units (rlu)), microwave irradiation immersed in water (8 rlu), and application of effervescent cleansing tabs (22 rlu). No statistically significant difference ($p > 0.05$) to control PBS (200 rlu) was found after immersion in hydrogen peroxide (172 rlu), glutaraldehyde (103 rlu), household vinegar (196 rlu), Listerine coolmint (194 rlu), Plax (222 rlu), dry microwave irradiation (221 rlu) and specimens left dry overnight (165 rlu). SEM displayed *C. albicans* monolayers with different morphologic forms on each surface investigated. **CONCLUSIONS:** Only soaking in sodium hypochlorite (1%; 10 min), microwave irradiation immersed in water (800 W; 6 min), and application of effervescent cleansing tabs (Blend-a-dent tabs; 10 min) proved to be effective against *C. albicans* colonization on soft denture relining material.

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