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Abstracts

JUST FOR ONCE, LESS IS BETTER!

The Effect of Variation in Etching Times on Dentine Bonding. A Abu-Hanna, VV Gordan and I Mjör. *General Dentistry* 2004; **52**: 28–33.

It has long been accepted that enamel bonding is a predictable and reliable adhesive procedure, provided one conforms to the manufacturer's recommended etching times. Reducing etching times may seriously compromise the adhesive bond. Dentine bonding, conversely, is more

problematic. Acid etching dentine removes the smear layer and demineralizes the subjacent dentine matrix. Micromechanical retention is achieved by resin infiltrating dentinal tubules, including their branches, and the remaining collagen matrix to form a hybrid layer of resin-impregnated dentine. Over etching may result in collapse of the exposed collagen fibres with reduced adhesive potential.

This research examined the depth of dentine demineralization and the thickness and morphology of the hybrid

layer following different etching times of 5, 15, 30 and 60 seconds. There was a direct correlation between the etching times and the depth of the demineralized zone. It was found that a 5 second etch was sufficient, and etching for anything between 15 and 60 seconds resulted in excessive penetration of the dentine, leaving voids and porosities that could create channels for microleakage. Just for once, less surgery time may be beneficial!

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