

Noise level of dental handpieces and laboratory engines

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Impaired hearing in dental practitioners has been the subject of various investigations. Although individual age and susceptibility can play a significant role, the intensity of the noise, distance from the noise source, and total duration of the noise are the important factors in hearing. In this study the noise levels of different handpieces and laboratory engines were evaluated. Handpiece noise measurements were made while instruments were running free and during operation with various cutting tools. These measurements were performed with two kinds of noise-measuring equipment; (1) a precision sound level meter and (2) a noise recording and analyzing circuit. The results indicated that (1) there were significant differences among the noise levels of the various dental engines used, (2) the low-speed, angled-design handpiece has the lowest noise level, whereas the laboratory engine has the highest, (3) the noise level increases during cutting was compared with noncutting, and (4) there was no significant difference between the two methods of measurement. (J PROSTHET DENT 1993;70:356-60.)