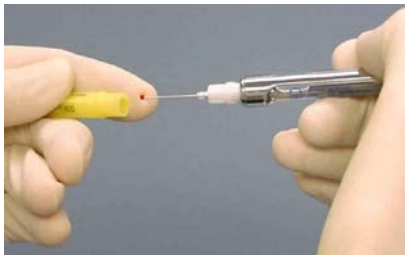
Needlestick Injuries (9/03)

Needlestick injuries among medical students. Patterson JM, Novak CB, Mackinnon SE, Ellis RA. Am J Infect Control 2003;31:226-230.



This study evaluated needlestick injuries and practices regarding the use of protective strategies against bloodborne pathogens in medical students using a questionnaire. Of 224 students, 146 students responded (64%). Forty-three (30%) reported needlestick injuries that most commonly occurred in the operating room; 86% of students reported always using double gloves in the operating room; 90% reported always wearing eye protection, and all but one student had been vaccinated against hepatitis B. A concern about contracting a bloodborne pathogen through work was noted in 125 students, although they usually reported that this concern only slightly influenced their decision regarding a career subspecialty. **Medical students have a high risk for needlestick injuries, and attention should be directed to protection strategies against bloodborne pathogens.**

DIS Comment: Methods used to prevent occupational exposures in health-care settings include standard precautions, engineering and work practice controls, and the use of personal protective equipment. The authors of the study reported that 86% of the medical students always wore double gloves in the operating room. Most studies among medical and dental personnel have shown a lower frequency of inner glove perforation and visible blood on the surgeon's hands when double gloves are worn however the effectiveness of wearing two pairs of gloves in preventing disease transmission has not been demonstrated.[1-8] In one study evaluating double gloves during oral surgical and dental hygiene procedures, the perforation of outer latex gloves was greater during longer (more than 45 minutes) than shorter procedures, with the highest rate, 10%, found during oral surgery procedures.[4] Double gloving does not appear to significantly reduce either manual dexterity or tactile sensitivity[9-11] Based upon these studies, double gloving may provide additional protection from occupational blood contact.[12]

Studies indicate that percutaneous injuries have decreased in frequency since the mid-1980s and that injuries among general dentists occur less frequently than among surgeons.[13-17] This decline has been attributed to safer work practices, safer instrumentation or design, and continued worker education.[18,19] Percutaneous injuries among dental personnel generally occur outside the patient's mouth, thereby posing less of a risk for recontact with patient tissues, involve small amounts of blood, and are caused by burs, syringe needles, laboratory knives, and other sharp instruments. Injuries among oral surgeons may occur more frequently during fracture reductions using wires.[14-17,19-22] Experience, as measured by years in practice, does not appear to affect the risk of injury among general dentists or oral surgeons.[15,19,22]

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