

## One Hand Scoop Technique and Other Safety Devices to Assist in Recapping of Dental Needles

The current methods of recapping used dental needles are outdated and flawed. **The CDC and OSHA recommend the “one hand scoop technique” to recap used needles in dentistry, but not in medicine.** In medicine, the “one hand scoop technique” is no longer used; either safety needles are used or needles are thrown away attached to the plastic syringes without recapping. Many dental schools are still teaching the “one hand scoop technique.” Unfortunately, the “one hand technique” is **against our human nature** and this recommendation of the “one hand scoop technique” is going to be **ignored** over and over again. It is human nature to do it faster and more precisely with two hands than use the slower and insecure “one hand scoop technique.” Especially during busy times, we really cannot expect poorly trained, new dental assistants to use the “one hand scoop technique.”

Many **safety devices** were developed to avoid needle stick injuries during recapping of the used needles. These safety devices are made of metal, rubber or cardboard and they basically hold the cap of the needle so the operator can recap the used needles, sometimes using both hands. Many dental schools recommend and utilize these devices. But when such devices are missing for some reason, then these young professionals are at a **greater risk** of needle stick injuries.

The combination of these inadequacies can have life changing repercussions for young dental professionals as seen in the studies below:

G. McCarthy and J. Britton reviewed occupational injuries of final-year dental, medical and nursing students at The University of Western Ontario and published the results in the J Canadian Dent Assoc, Nov. 2000. Vol. 66, No.10. Nonsterile occupational injuries in the previous year were reported by **82% of dental**, 57% of medical and 27% of nursing respondents, including one HBV and one HIV exposure. Students who reported 2-handed recapping of needles had twice the number of percutaneous injuries (mean = 1.9/year) than those who avoided recapping or recapped with one hand using a device or scoop technique. Approximately one-third of all dental students reported recapping needles with both hands. Student health care workers are at increased risk of occupational injury because of inexperience in performing invasive procedures.

Shah, S., et al. in BMC Public Health 2006, 6:269 have reviewed workers’ compensation claims submitted to the Dept. of Labor and Industries State Fund during a 7-year period (1995 through 2001) in the State of Washington, USA. Of a total of 4,965 accepted State Fund percutaneous injury claims, 924 (20%) were submitted by dental professionals, **including dental assistants (667, 75%), dental hygienists (161, 18%) and dentists (66, 7%).** The absolute number of **injuries reported increased progressively each year**, from 78 in 1995 to 216 in 2001. The majority of those reporting were **females (638, 71%) and the mean age was 30 years (95% CI:29-31).** **Dental assistants sustained most of the injuries** while cleaning instruments and trays (n=160, 24%), followed by changing a local anesthetic carpule (n=125, 19%), and recapping a needle (n=118, 18%). Of the 894 dental health care workers with percutaneous injuries, there was evidence of HBV (hepatitis B virus) **in 6 persons, HCV (hepatitis C virus) in 30 persons, and HIV in 3 persons and both HBV and HCV (n=2) exposures.**

There are numerous clinical studies reporting needle stick injuries among dentists, **but the studies reporting needle stick injuries among dental assistants or hygienists are nonexistent.** It is generally held that needle stick injuries are rare among experienced dentists, but most injuries occur among the new dental healthcare professionals and dental assistants.

The healthcare agencies, dental schools, teaching hospitals, and dental employers should be acutely aware of potential needle stick injuries and be willing to actively implement dental safety needles. Needle stick injuries are a public health hazard that should be taken seriously. Every effort should be made in utilizing the safety devices whenever possible.