**Bacterial Contamination Transferred Through Handshaking**

Transfer of bacteria through handshaking in the clinical setting is an issue of concern and warranting investigation. Handshaking may be a likely mode for transmission of microorganisms [1]. Transfer of pathogenic microorganisms in the clinical environment is important because healthcare professionals and students are at risk. Contamination from instruments that can become vectors of cross-infection [2,3] may harbor pathogens such as *Streptococcus pneumoniae, Mycobacterium tuberculosis, Escherichia coli, Klebsiella pneumoniae, Legionella pneumophila* and *Pseudomonas aeruginosa* which have been implicated in cross-contamination [4]. Sklansky [5] proposed banning the handshake from the healthcare setting.

Handshaking a cultural tradition that has evolved over centuries as a general gesture of peace [6] may serve as a route for transfer of microorganisms via the hands of healthcare workers, and students. Survival of bacteria on the hands vary among pathogens. Studies done in the environmental setting show that handshaking can actually transfer pathogens [7]. Even spores of *Clostridium difficile* have been shown to be transferred via handshaking [5] as have *Enterobacteriaceae, Pseudomonas* and *Staphylococcus aureus* [8]. Bacterial contamination in the ward has been shown to be less with “fist bumping” as compared with handshaking. The WHO states hand-transmitted bacteria are still abundant in hospitals [9].

We recently undertook a study wherein we initially swabbed 76 students upon entry to the ward and again after shaking hands with their classmates and colleagues. After taking samples and culturing we observed *Staphylococcus epidermidis, Micrococcus* and *Peptostreptococcus in* 100, 39.5 and 32.9% of the subjects, respectively. *Staphylococcus aureus, Bacillus Spores, Actinomyces* and *Klebsiella were detected in 30.3, 23.7, 13.15 and 13.15% of the students, respectively. Transfer of bacterial contamination after handshaking significantly increased for *Staphylococcus epidermidis* from 93.4 to 97% (P < 0.001). *Bacillus anthracis and Micrococcus* increased from 39.5 to 89.5% and 32.9 to 83.9%, respectively (P < 0.001). Bacterial contamination for *Peptostreptococcus increased from 30.3 to 80.3%, Staphylococcus aureus 23.7 to 40.8%, Spore Bacillus 13.15 to 22.4%, Klebsiella 13.15 to 22.4 and Actinomyces 13.15 to 18.4%. These results suggest that handshaking can indeed be a mode of microbial transfer and bacterial cross-contamination which may be dangerous especially in immunocompromised subjects.

**References**


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