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CROSS-CONTAMINATION OF GLOVES WHEN BEING PUT ON

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Introduction

The 1999 FDA Food Code specifies recommended hand washing procedures for food employees in §2-301. Food employees shall keep their hands and exposed portions of their arms clean by vigorously rubbing together the surfaces of their lathered hands and arms for at least 20 seconds and thoroughly rinsing with clean water. Employees shall pay particular attention to areas underneath the fingernails and between the fingers.

In §3-301.11, the code states that "Food employees may not contact exposed, ready-to eat food with their bare hands and shall use suitable utensils such as deli tissue, spatulas, tongs, single-use gloves, or dispensing equipment."

This experiment addresses the question of whether single-use gloves have any public health value if food employees do not wash their hands and particularly, fingertips, properly.

Experiment Design

In this experiment, Glo-Germ, used to simulate fecal pathogens, was put onto a person's fingertips. The person then removed single-use gloves from a box and put them on under ultraviolet light in order to study the transfer of Glo-Germ.

Results

Figures 1 through 8 show the results of the experiment.

Figure 1: Glo-Germ is applied to the fingertips.

Figure 2: Fingertips are used to touch gloves.

Figure 3: Fingertips are used to remove gloves from the box.

Figure 4: Note that a little bit of Glo-Germ has contaminated the edge of the box and the next glove.

Figures 5, 6, 7, and 8: The person first puts the glove on the right hand and then the left.

Figure 8: This figure shows the final result. A great deal of contamination of the glove appears on the right hand from the "dirty" fingers used to remove the glove from the box.

Conclusion

It is apparent from this simple experiment that if fingertips have not been washed correctly, there will be the possibility of a significant transfer of fecal material to the gloves. In this way, the gloves will be just as dangerous as unwashed fingers. The only safe control is for management to have a hand washing policy, and enforce that policy when employees come into the kitchen to go to work or return to the kitchen after using the toilet. If management wants to have employees wear disposable gloves, that is management's decision. However, disposable gloves should never be used as an alternative to inadequate management enforcement of correct fingertip and hand washing.

