Failure rates in nonlatex surgical gloves

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Background: The purpose of this study was to compare the frequency of glove defects for nonlatex surgical gloves while surgeons performed routine surgery and to evaluate surgeons' satisfaction with nonlatex sterile gloves.

Methods: Two brands of latex gloves and 6 brands of nonlatex gloves were tested. Gloves were collected at the end of each surgical procedure and tested for visual defects and barrier integrity using an automated calibrated water test machine consistent with FDA's recommended standards. A total of 6386 gloves used by 101 surgeons and 164 residents representing 15 surgical services were included in the analysis.

Results: Higher after-sue defect rates occurred in nonlatex surgical gloves than in latex gloves. Higher times of use were related to higher defect rates for some surgical specialties, and both surgeons and residents were less satisfied with nonlatex surgical gloves.

Conclusion: Intact latex and nonlatex surgical gloves provide adequate barrier protection. Nonlatex surgical gloves have higher failure rates and lower user satisfaction than latex gloves do. Both nonlatex and latex gloves should be changed after 2 to 3 hours of use because the barrier of either type of gloves becomes compromised with extended use.