

0425 **STUDY ON BLOOD CONTACT IN SIMULATED SURGICAL NEEDLE STICK INJURIES WITH SINGLE OR DOUBLE LATEX GLOVING**

N Kralj\*, A Wittmann, J Koeber, K Gasthaus, F Hofman *Correspondence: Department of Safety Engineering, Chair for Work Physiology, Occupational Medicine & Infectiology, University of Wuppertal, Gauss Str. 20 D-42097 Wuppertal, Germany*

10.1136/ip.2010.029215.425

**Objective** Needlestick injuries are the most common injuries occurring among operation room personnel in the health service. The risk of infection following a needle stick injury during surgery, greatly depends on the quantity of pathogenic germs transferred at the point of injury. The aim of this study was to measure the quantity of blood transferred at the point of a percutaneous injury using radioactively labelled blood.

**Design** This study was conducted to evaluate the risk of infection through blood contact by simulating surgical needle stick injuries ex vivo. The tests were conducted by puncturing single and double latex gloves with diverse sharps that were contaminated with <sup>99</sup>Tclabeled blood.

**Results** On average 0.064 l blood was transferred in punctures with the Unistik3 Normal automatic lancet at a depth of 2.4 mm through one layer of latex. When using the double gloving indicator technique, an average of another 0.011 l was transferred (median 0.007 l), thus, by wearing two pairs of gloves, the transferred volume of blood was reduced by a factor of 5.8.

**Conclusion** The results show that double gloving leads to a significant reduction in the quantity of blood transferred during needle stick injury.