

## SAFETY OF THE SURGEON: 'DOUBLE-GLOVING' DURING SURGICAL PROCEDURES



Surgeons have the highest risk of contact with patient's blood and body fluids. Breaches in gloving material may expose operating room staff to the heinous risk of infections. Today, At SPM, we quote this extract from a highly specialized study conducted at Lady Hardinge Medical College, New Delhi to prove a point.

The aim of the study was to assess the frequency of glove perforation, and subsequent blood or body fluid contact associated with common general surgical operations. For this purpose, a team of specialists used a method known as the spirit wash method on operating surgeons and the first assistant so as to detect the presence of pre and post operative skin abrasions. Perforation and visible skin contamination after surgery was recorded as below :

GLOVING PATTERN	PERFORATIONS	NO (%) WITH VISIBLE SKIN CONTAMINATION
Single Glove	19	8(42.1)
Double Glove	22	5(22.7)

The presence of visible skin contamination was higher in perforation with the single gloving pattern (42.1%) than with the double gloving pattern (22.7%).

Reference : Thomas S, Agarwal M, Mehta G. Intraoperative glove perforation: Single v. double-gloving in protection against skin contamination. *Postgrad Med J* 2001;77(909):458-460. [<http://dx.doi.org/10.1136/pmj.77.909.458>]

## DOUBLE GLOVING : MYTH VERSUS FACT

**Myth1 : Needle sticks and sharp injuries are uncommon events.**

**Truth:**

- Cuts or needle sticks may occur in as many as 15 percent of operations.
- Up to 16 percent of injuries occur while passing sharp instruments hand-to-hand.
- Suture needles are the most frequent source of injury and are involved in as many as 77 percent of total injuries. Most injuries are self-inflicted, but a notable number, perhaps as many as 24 percent, are inflicted by a co- worker.
- Most, if not all, surgeons have encountered blood on their hands or fingers at the conclusion of a procedure without being aware of an injury or glove barrier breach by any other method (glove puncture tear or failure). The practice of wearing two pairs of gloves offers a high degree of protection from this common event.

**Myth2 : The glove failure rate is equally high with double gloves as with single**

**Truth:**

- Double-gloving reduces the risk of exposure to patient blood by as much as 87 percent when the outer glove is punctured. Volume of blood on a solid suture needle is reduced by as much as 95 percent when passing through two glove layers, thereby reducing viral load in the event of a contaminated percutaneous injury.
- One study conducted a prospective, randomized, trial of 143 procedures involving 284 people and found the glove failure rate (i.e., blood contamination of the fingers) was 51 percent when one glove was worn but only 7 percent with double-gloving.

Reference : Personal Protective, Infection Control Today By Linda McNeilly member of the Surgical Products team at Cardinal Health

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