Disposable surgical face masks for preventing surgical wound infection in clean surgery (Review)

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Disposable surgical face masks for preventing surgical wound infection in clean surgery

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ABSTRACT

Background
Surgical face masks were originally developed to contain and filter droplets containing microorganisms expelled from the mouth and nasopharynx of healthcare workers during surgery, thereby providing protection for the patient. However, there are several ways in which surgical face masks could potentially contribute to contamination of the surgical wound, e.g. by incorrect wear or by leaking air from the side of the mask due to poor string tension.

Objectives
To determine whether disposable surgical face masks worn by the surgical team during clean surgery prevent postoperative surgical wound infection.

Search methods
We searched The Cochrane Wounds Group Specialised Register (searched 14 September 2011); The Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2011, Issue 3); Ovid MEDLINE (2008 to August Week 5 2011); Ovid MEDLINE (In-Process & Other Non-Indexed Citations September 13, 2011); Ovid EMBASE (2008 to 2011 Week 35); and EBSCO CINAHL (2008 to 9 September 2011).

Selection criteria
Randomised controlled trials (RCTs) and quasi-randomised controlled trials comparing the use of disposable surgical masks with the use of no mask.

Data collection and analysis
Two review authors extracted data independently.

Main results
Three trials were included, involving a total of 2113 participants. There was no statistically significant difference in infection rates between the masked and unmasked group in any of the trials.
Authors’ conclusions

From the limited results it is unclear whether the wearing of surgical face masks by members of the surgical team has any impact on surgical wound infection rates for patients undergoing clean surgery.

PLAIN LANGUAGE SUMMARY

Disposable surgical face masks for preventing surgical wound infection in clean surgery

Surgeons and nurses performing clean surgery wear disposable face masks to prevent them passing germs from their noses and mouths into patients’ wounds. Face masks are thought to reduce the number of postoperative wound infections. Incorrectly worn masks may increase the contamination of the wound. This review of trials found no clear evidence that wearing disposable face masks increases or reduces the number of surgical wound infections in clean surgery. More research is needed.