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Disposable surgical face masks: a systematic review

Surgical face masks were developed to contain and filter droplets of 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. Surgical face masks have recently been advocated as a protective barrier between the surgical team and the patient, but the role of the surgical face mask as an effective measure in preventing surgical wound infection is questionable. The aim of the systematic review is to identify and review all Randomized Controlled Trials (RCT's) evaluating disposable surgical face masks worn by

the surgical team during clean surgery to prevent postoperative surgical wound infection. All relevant publications about disposable surgical face masks were sought through the Specialized Trials Register of the Cochrane Wounds Group (March 2001). Manufacturers and distributors of disposable surgical masks as well as professional organizations including The National Association of Theatre Nurses and the Association of Operating Room Nurses were contacted for details of unpublished and ongoing studies. RCT's and quasi randomized controlled trials comparing the use of disposable surgical masks with the use of no mask were included. Main result: Two RCT's were included involving a total of 1453 patients. In a small trial

there was a trend towards masks being associated with fewer infections, whereas in a large trial there was no difference in infection rates between the masked and unmasked group. Neither trial accounted for cluster randomization in the analysis. Reviewers' conclusions: From the limited results it is unclear whether wearing a surgical face mask results in any harm or benefit to the patient undergoing clean surgery. (Lipp A., Edwards P.2005,Sept 23). Disposable surgical face masks: a systematic review.

Can Oper Room Nurse J., (3):20-1, 24-5, 33-8. retrieved from PubMed-indexed for MEDLINE.)

Having said that, a surgical mask that covers both the nose and mouth and protective eyewear with solid side shields or a face shield should be worn by dental health care professionals during procedures and patient care activities likely to generate splashes or sprays of blood or body fluids. A surgical mask protects against mi-

continued on reverse

Dental Fun Fact

DID YOU KNOW THAT...

When asked to select the invention they could not live without from among five choices-toothbrush, automobile, personal computer, cell phone, and microwave- more than a third of teens (34%) and almost half of adults (42%) cited the toothbrush.

Lemelson-MIT Survey, 2003

News You Can Use

A surgical mask loses its protective qualities when it gets wet.

When a mask gets wet, the material doesn't "breathe" as well as it should. This causes more airflow to pass by edges of the mask. It also may cause you to inhale harder, pulling the damp, contaminated mask closer to your nose and mouth.

Your surgical mask can become wet simply from your exhaling warm moist air into it. Your breath condenses on the mask's surface, leaving it damp. The mask's outer surface also can become contaminated with droplets from spray and spatter or from touching the mask with contaminated fin-

gers. (A surgical mask loses its protective qualities when it is wet. Change your mask whenever it becomes wet either from the outside splatter or the inside condensation from your breath. Practical experience suggests about every 20 minutes).

Remember: Masks are to be worn over your nose and mouth; they offer no protection when worn around your neck or on top of your head. Improperly worn, they can ever spread contamination to your clothes, skin, and hair.

Organization for Safety & Asepsis Procedures (1997) Personal Protective Equipment. *From Policy to Practice.*

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croorganisms generated by the wearer, with >95% bacterial filtration efficiency, and also protect dental health care professionals from large particle droplet spatter that might contain blood borne pathogens or other infectious microorganisms. The mask's outer surface can become contaminated with infectious droplets from spray

of oral fluids or from touching the mask with contaminated fingers. Also, when a mask becomes wet from exhaled moist air, the resistance to airflow through the mask increases, causing more airflow to pass around edges of the mask. If the mask becomes wet, it should be changed between patients or even during

patient treatment, when possible.

The majority of surgical masks are not NIOSH-certified as respirators, do not protect the user adequately from exposure to TB, and do not satisfy OSHA requirements for respiratory protection. However, certain surgical masks do meet

the requirements and are certified by NIOSH as respirators.

Centers for Disease Control and Prevention. Guidelines for Infection Control in Dental Health-Care Settings-2003.MMWR 2003;52(No. RR-17):[17]

Dr. Brian Simpson
announces the first meeting of the

NANUET IMPLANT STUDY GROUP

Marc Samani, DMD

**Associate Clinical Professor, Dept of Prosthodontics & Biomaterials
New Jersey Dental School**

IMPLANT CASE DISCUSSION

November 12, 2009

Dinner: 6:30 Presentation: 7:00 — 9:00 pm

Pasta Cucina 253 South Little Tor Rd, New City

2 CE credits awarded by the Ninth District Dental Association

Cost: \$30.00

**Please bring your cases and documentation
(photos, x-rays, models) for discussion.**

**To register, contact Theresa: 845-623-3497
or email her at theresag@drbriansimpson.com**

**“I am always doing that which I cannot in order that I
may learn how to do it.” -Pablo Picasso**