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Use of surgical face masks to reduce the incidence of the common cold among health care workers in Japan: A randomized controlled trial

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Background

Health care workers outside surgical suites in Asia use surgical-type face masks commonly. Prevention of upper respiratory infection is one reason given, although evidence of effectiveness is lacking.

Methods

Health care workers in a tertiary care hospital in Japan were randomized into 2 groups: 1 that wore face masks and 1 that did not. They provided information about demographics, health habits, and quality of life. Participants recorded symptoms daily for 77 consecutive days, starting in January 2008. Presence of a cold was determined based on a previously validated measure of self-ed symptoms. The number of colds between groups was compared, as were risk factors for experiencing cold sym s.

Results

Thirty-two health care workers completed the study, resulting in 2464 subject days. There were 2 colds during this time period, 1 in each group. Of the 8 symptoms recorded daily, subjects in the mask group were significantly more likely to experience headache during the study period ($P < .05$). Subjects living with children were more likely to have high cold severity scores over the course of the study.

Conclusion

Face mask use in health care workers has not been demonstrated to provide benefit in terms of cold symptoms or getting colds. A larger study is needed to definitively establish noninferiority of no mask use

References

1. Resnick J.
Rationale for Chinese gauze masks?.
N Engl J Med. 1973; **289**: 757

View in Article
Scopus (2) • PubMed • Crossref • Google Scholar

2. Jefferson T. • Foxlee R. • Del Mar C. • Dooley L. • Ferroni E. • Hewak B. • et al.
Physical interventions to interrupt or reduce the spread of respiratory viruses: a systematic review.
BMJ. 2008; **336** (Epub 2007 Nov 27): 77-80

View in Article
Scopus (152) • PubMed • Crossref • Google Scholar

3. Meyers L.A. • Pourbohloul B. • Newman M.E.J. • Skowronski D.M. • Brunham R.C.
Network theory and SARS: predicting outbreak diversity.
J Theor Biol. 2005; **232**: 71-81

View in Article
Scopus (399) • PubMed • Crossref • Google Scholar

4. UCLA Asia Institute. Teaching about Japan: population density. Available at: http://www.isop.ucla.edu/eas/japan/geography/density1.htm Last updated: November 3, 2004. Accessed October 5, 2007.

ew in Article

Google Scholar

5. Bellei N. • Carraro E. • Perosa A.H. • Benfica D. • Granato C.F.
Influenza and rhinovirus infections among health-care workers.
Respirology. 2007; **12**: 100-103

View in Article
Scopus (31) • PubMed • Crossref • Google Scholar

6. Jackson G.G. • Dowling H.F. • Spiesman I.G. • Boand A.V.
Transmission of the common cold to volunteers under controlled conditions. 1. The common cold as a clinical entity.
Arch Intern Med. 1958; **101**: 267-278

View in Article
Scopus (234) • Crossref • Google Scholar

7. Monto A.S.
Epidemiology of viral respiratory infections.
Am J Med. 2002; **112**: S4-S12

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8. Ministry of Health Labour and Welfare (MHLW). Anti-flu general action in Japanese. Available at: http://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou01/. Accessed November 26, 2007.

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