

> Clin Orthop Relat Res. 1975 Sep;(111):147-50. doi: 10.1097/00003086-197509000-00020.

ACTIONS

[Cite](#)[Favorites](#)

SHARE



PAGE NAVIGATION

[Title & authors](#)[Abstract](#)[Similar articles](#)[Cited by](#)[MeSH terms](#)[Related information](#)[LinkOut - more resources](#)

The operating room environment as affected by people and the surgical face mask

M A Ritter, H Eitzen, M L French, J B Hart

PMID: 1157412 DOI: 10.1097/00003086-197509000-00020

Abstract

The microbiological counts were determined in an operating room suite of 8 rooms and a hallway. The bacterial counts in an empty operating room jumped statistically from 13 CFU/ft²/hr (+/- 31) to 24.8 (+/- 58.8) when the doors were left open (people in the hallways) and 447.3 (+/- 186.7) when 5 people were introduced. The wearing of a surgical face mask had no effect upon the overall operating room environmental contamination and probably work only to redirect the projectile effect of talking and breathing. People are the major source of environmental contamination in the operating room.

Similar articles[Conversation in the operating theater as a cause of airborne bacterial contamination.](#)

Letts RM, Doermer E.

J Bone Joint Surg Am. 1983 Mar;65(3):357-62.

PMID: 6338018

[Microbiologic environment of the conventional operating room.](#)

Fitzgerald RH Jr.

Arch Surg. 1979 Jul;114(7):772-5. doi: 10.1001/archsurg.1979.01370310014003.

PMID: 454169

[Surgical face masks in modern operating rooms--a costly and unnecessary ritual?](#)

Mitchell NJ, Hunt S.

J Hosp Infect. 1991 Jul;18(3):239-42. doi: 10.1016/0195-6701(91)90148-2.

PMID: 1680906

[Surgical attire and the operating room: role in infection prevention.](#)

Salassa TE, Swiontowski MF.

J Bone Joint Surg Am. 2014 Sep 3;96(17):1485-92. doi: 10.2106/JBJS.M.01133.

PMID: 25187588 Review.

[Role of the environment of the operating suite in surgical wound infection.](#)

Ayliffe GA.

Rev Infect Dis. 1991 Sep-Oct;13 Suppl 10:S800-4. doi: 10.1093/clinids/13.supplement_10.s800.

PMID: 1754788 Review.

[See all similar articles](#)**Cited by** 16 articles[Impact of the Surgical Environment on the Incidence, Timing, and Severity of Complications Associated With Oromaxillofacial Oncologic Surgery in Dogs.](#)

Rigby BE, Malott K, Sample SJ, Hetzel SJ, Soukup JW.

Front Vet Sci. 2021 Dec 17;8:760642. doi: 10.3389/fvets.2021.760642. eCollection 2021.

PMID: 34977206 [Free PMC article.](#)[Fellows and Observers Are Not a Problem for Infection in the Operating Rooms of Teaching Centers.](#)

Montiel V, Pérez-Prieto D, Perelli S, Monllau JC.

Trop Med Infect Dis. 2021 Mar 31;6(2):43. doi: 10.3390/tropicalmed6020043.

PMID: 33807317 [Free PMC article.](#)[Are facemasks a priority for all staff in theatre to prevent surgical site infections during shortages of supply? A systematic review and meta-analysis.](#)

Marson BA, Craxford S, Valdes AM, Olivere BJ.

Surgeon. 2021 Oct;19(5):e132-e139. doi: 10.1016/j.surge.2020.08.014. Epub 2020 Oct 7.

PMID: 33039336 [Free PMC article.](#)[Understanding the factors involved in determining the bioburdens of surgical masks.](#)

Liu Z, Yu D, Ge Y, Wang L, Zhang J, Li H, Liu F, Zhai Z.

Ann Transl Med. 2019 Dec;7(23):754. doi: 10.21037/atm.2019.11.91.

PMID: 32042770 [Free PMC article.](#)[Evaluation of Air Contamination in Orthopaedic Operating Theatres in Hospitals in Southern Italy: The IMPACT Project.](#)

Montagna MT, Rutigliano S, Trerotoli P, Napoli C, Apollonio F, D'Amico A, De Giglio O, Diella G, Lopuzzo M,

Marzella A, Mascipinto S, Pousis C, Albertini R, Pasquarella C, D'Alessandro D, Serio G, Caggiano G.

Int J Environ Res Public Health. 2019 Sep 25;16(19):3581. doi: 10.3390/ijerph16193581.

PMID: 31557819 [Free PMC article.](#)[See all "Cited by" articles](#)**MeSH terms**

- [Air Microbiology*](#)
- [Clothing](#)
- [Humans](#)
- [Masks*](#)
- [Operating Rooms / standards*](#)
- [Surgical Wound Infection / prevention & control](#)
- [Ventilation](#)

Related information[MedGen](#)**LinkOut – more resources**[Full Text Sources](#)[Ovid Technologies, Inc.](#)[Other Literature Sources](#)[The Lens - Patent Citations](#)