



KEY POINT SUMMARY

OBJECTIVES

To review previous studies concerning the cleanliness issues and potential health outcomes associated with carpets.

Do Carpets Impair Indoor Air Quality and Cause Adverse Health Outcomes: A Review

Becher, R., Øvrevik, J., Schwarze, P. E., Nilsen, S., Hongslo, J. K., Bakke, J. V., 2018 | *International Journal of Environmental Research and Public Health*. Volume 15, Issue 2, Page 184

Key Concepts/Context

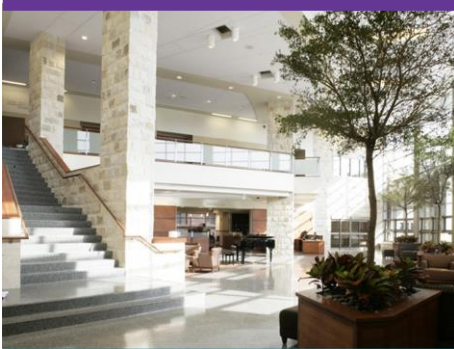
Previous studies have found that carpets are capable of collecting more dust and allergens than non-carpeted surfaces, highlighting further studies that suggest that the presence of carpets can worsen indoor air quality and certain respiratory conditions. However, counterarguments to these studies note that modern carpets do not present these issues, and their use should be reconsidered. A review of published research is needed to weigh these arguments and gain insight into the nature of modern carpets.

Methods

Literature reviewed in this study spanned from 1980 to 2017. A total of 49 peer-reviewed resources were pulled from PubMed and Google Scholar for comparative analysis. Search terms included: allergen levels, carpets, adverse health effects, smooth floors, asthma, indoor environment, respiratory disease, and health impact. All studies were assessed for strength of study design and relevance of concluding data. Carpets were generally assessed for volatile organic compounds (VOCs), and were compared to a variety of smooth flooring surfaces.

Findings

In the majority of studies included in this literature review, there were significantly higher levels of dust and allergens detected in carpets as opposed to smooth surfaces. A number of studies suggested that dust may be trapped in carpets for extended periods of time, regardless of vacuuming or other cleaning efforts. Some studies indicated that dust trapped in carpets might not become airborne very easily, suggesting that they may not pose an immediate risk in certain environments.



The Center for Health Design:
Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research that demonstrates the value of design to improve health outcomes, patient experience of care, and provider/staff satisfaction and performance.

Learn more at
www.healthdesign.org

Limitations

This study was a literature review that compared and summarized data from previously published research; accordingly, no original data were collected through field observations or other quantitative methods.

Design Implications

Designers should carefully consider the location of carpeted floors and smooth floors in order to minimize the amount of allergens or other particulate matter that may accumulate on the floor. Carpeted floors may retain certain allergens or other particles; however, the risks posed by these factors may be abated through proper cleaning and maintenance measures.

The Knowledge Repository is a collaborative effort with our partners

Academy of
Architecture for Health
an AIA Knowledge Community



Design for Aging
an AIA Knowledge Community



Additional key point summaries provided by:



RESEARCH DESIGN
CONNECTIONS