

# Identifying the gaps regarding exposure to aeroallergens in schools: Systematic review

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## Background

Allergic diseases are a major concern in high income countries, and their occurrence continues to increase worldwide<sup>1</sup>. Despite previous studies reporting the health effects of exposure to both chemical and (micro)biological agents<sup>2,3</sup>, aeroallergens have been less well studied. Most studies have focused on exposure to indoor allergens at home. However, exposure can happen in other environments, including in schools where children spend much of their time.



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## Review questions

What are the most common indoor allergens in schools?  
What methods (sampling and assays) are applied to measure the levels of indoor allergens in schools?  
What are the levels of indoor allergens in schools?  
What are the determinants of indoor allergens in schools?  
Which areas of schools have the highest levels of allergens (e.g., wet areas/bathrooms)?  
What are the effects of exposure to indoor allergens on asthma, asthma-like symptoms, asthma control, allergic sensitization, and allergic diseases?



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## The team

Public Health	Microbiology	Clinical Analysis
Occupational and Health Environment	Food and Nutrition	Medicine/Immuno-allergy



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## Protocol

### Search databases

SciVerse Scopus  
PubMed MEDLINE  
Web of Science

### Search terms

((indoor OR inter\*) AND allergens) AND schools  
AND ("allerg\*" OR asthma OR sensitiz\*)

### Review process

Covidence Systematic Review Software  
5 reviewers  
Screening, full text review, quality assessment,  
and extraction of the information

Protocol will be submitted in [PROSPERO](#).

### Inclusion criteria

Articles published until the day of the search, studies conducted in humans and published in English, no restrictions will be applied on the type of study or article format, and geographic areas will be considered.

To be included in this review, the study had to provide data (related to schools):

- indoor allergens assessed;
- sampling methods and assays applied to measure the levels of indoors allergens;
- on the levels of indoor allergens, including food allergens, pets, moulds/fungi, bacteria, dust mite, cockroach, insects, pests and pollen;
- on determinants (e.g., building characteristics and behaviours) of indoor allergens; and
- on the relations between exposure to indoor allergens on asthma, asthma-like symptoms, asthma control, allergic sensitization, and allergic diseases (including food allergy, allergic rhinitis, atopic dermatitis).



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## Results

10379 papers extracted.  
Currently in review process.

Results will be discussed to identify the roadmap regarding surveillance and/or mitigation of aeroallergens exposure at schools.