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## ALLERGEN IMMUNOTHERAPY FOR THE PREVENTION OF ALLERGY A SYSTEMATIC REVIEW AND META-ANALYSIS

🌀 Supplementary materials 🌀

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## APPENDIX 1.1 SEARCH STRATEGY

### Search strategy 1: MEDLINE, EMBASE

1	exp Primary prevention/	32	exp Intervention Studies/
2	Primary prevention.mp.	33	Intervention studies.mp.
3	exp Secondary prevention/	34	exp Clinical Trial/
4	Secondary prevention.mp.	35	trial.mp.
5	exp Tertiary prevention/	36	Clinical trial.mp.
6	Tertiary prevention.mp.	37	exp Controlled Clinical Trial/
7	Prevention.mp.	38	Controlled Clinical Trial.mp.
8	Etiology.mp.	39	Randomized Controlled Trial.mp.
9	Epidemiologic*.mp.	40	Quasi-randomized trial.mp.
10	("risk of developing" or "risk for development").mp.	41	Non-randomized trial.mp.
11	(effect* or cause* or protect* or risk*).mp.	42	exp Placebos/
12	or/1-11	43	Placebos.mp.
13	exp Desensitization, Immunologic/	44	exp Random allocation.mp.
14	exp Immunotherapy/	45	Random allocation.mp.
15	Desensitization.mp.	46	exp Double-blind method/
16	Hyposensitisation.mp.	47	Double-blind method.mp.
17	Allergy vaccination.mp.	48	Double-blind design.mp.
18	(Immunotherapy or allergen immunotherapy).mp.	49	exp single-blind method/
19	Subcutaneous immunotherapy.mp.	50	Single-blind method.mp.
20	Epicutaneous immunotherapy.mp.	51	Single-blind design.mp.
21	Intradermal immunotherapy.mp.	52	Triple-blind method.mp.
22	Sublingual immunotherapy.mp.	53	Random*.mp.
23	Oral Immunotherapy.mp.	54	(Controlled before and after stud*).mp.
24	Oral desensitization.mp.	55	Interrupted Time Series Analysis/ or interrupted time series.mp.
25	Specific oral tolerance induction.mp.	56	Search:.tw.
26	Oral tolerance induction.mp.	57	Review.pt.
27	Intranasal immunotherapy.mp.	58	Systematic review.tw.
28	Bronchial immunotherapy.mp.	59	Meta analysis.mp,pt.
29	Intralymphatic immunotherapy.mp.	60	Case series.mp.
30	Specific immunotherapy.mp.	61	(Case\$ and series).tw.
31	Or/13-30	62	Cost:.mp.

63	Cost effective:.mp.
64	Cost utility:.mp.
65	Exp Health care Costs/
66	(Costs and Costs Analysis).mp.
67	Economic evaluation*.mp.

68	((cost effective* adj1 analys*) or cost minimi?ation analys* or cost benefit analys* or cost utility analys* or cost consequence analys* or finances).mp.
69	Or/32-68
70	12 and 31 and 69

## Search strategy 2: Cochrane library, HTA, EED, CINAHL, ISI Web of Science, TRIP

(Prevention or “primary prevention” or secondary prevention” or “tertiary prevention” or etiology or “risk of developing” or “risk for development” or effect\* or cause\* or protect\* or risk)

AND

(Immunologic, desensiti\* or hyposensitization or immunotherapy or allergen immunotherapy or specific immunotherapy or allergen specific immunotherapy or allergy vaccination or subcutaneous immunotherapy or epicutaneous immunotherapy or intradermal immunotherapy or sublingual immunotherapy or oral immunotherapy or oral desensitization or specific oral tolerance induction or oral tolerance

induction or intranasal immunotherapy or bronchial immunotherapy or intralymphatic immunotherapy)

AND

(Intervention stud\* or experimental stud\* or trial or clinical trial\* or controlled clinical trial or randomi\* controlled trial or random allocation or single blind method or double blind method or triple blind method or random\* or systematic review or meta-analysis or case series or economic evaluation\* or cost effective\* analys\* or cost minimization analys\* or cost benefit analys\* or cost utility analys\* or cost consequence analys\* or finances)

## APPENDIX 1.2 EXPERTS CONSULTED

1	Lars Jacobsen, Denmark
2	Eva Maria Varga, Austria
3	Erkka Valovirta, Finland
4	Peter Eng, Switzerland
5	Ojedo, Pedro, Spain

## APPENDIX 1.3 PRISMA CHECKLIST

Section/topic	#	Checklist item	Reported on page #
<b>TITLE</b>			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	3
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	4
<b>METHODS</b>			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	6
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	5
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	E3-4
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	4-5
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	5
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	4-5
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	5
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	4
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I <sup>2</sup> ) for each meta-analysis.	5
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	5-6
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	5

Section/topic	#	Checklist item	Reported on page #
<b>RESULTS</b>			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	6
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	6-21
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	22-23
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	6-21
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	23-29
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	22-23
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	12-27
<b>DISCUSSION</b>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	30
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	30
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	30
<b>FUNDING</b>			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	30

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097