

## APPENDIX 1: Search strategies

<b>PubMed</b>	
<b>#1</b>	"head lice" OR headlice OR pediculus [Mesh] OR pediculosis OR "head louse" OR "lice infestations/therapy" [Mesh]
<b>#2</b>	treatment OR therapy OR intervention OR therapeutics [Mesh] OR pediculid* OR insectid* OR shampoo OR crème rinse OR lotion OR mousse OR therapeutics OR ivermectin OR malathion OR permethrin OR dimeticone OR lindane OR crotamiton OR spinosad OR bioallethrin OR phenothrin OR piperonyl butoxide OR d-phenothrin OR carbaryl OR pyrethrin OR DDT OR benzyl alcohol OR benzyl benzoate OR isopropyl myristate OR clophenothane OR isopropyl alcohol OR stearyl alcohol OR albendazole OR thiabendazole OR levamisole OR diethylcarbamazine OR cotrimoxazole OR co-trimoxazole OR coconut OR anise OR Ylang-ylang OR mayonnaise OR petroleum jelly OR tub margarine OR herbal oil OR essential oil OR vinegar OR melted butter OR neem seed OR azadirachtin OR grapefruit OR melaleuca OR tee tree OR lavender OR natural product OR eucalyptus OR quassia OR paw OR thymol OR electr* OR bug OR bust* OR formic acid OR air OR shaving OR bald
<b>#3</b>	<b>#1 AND #2</b>
<b>Embase (via Scopus)</b>	
<b>#1</b>	pediculosis AND [mtree] OR pediculus AND [mtree] OR head AND louse OR head AND lice OR headlice OR pediculus OR pediculosis
<b>#2</b>	treatment OR therapy OR intervention OR pediculid* OR insectid* OR shampoo OR "crème rinse" OR lotion OR mousse OR therapeutics OR ivermectin OR malathion OR permethrin OR dimeticone OR lindane OR crotamiton OR spinosad OR bioallethrin OR phenothrin OR "piperonyl butoxide" OR d-phenothrin OR carbaryl OR pyrethrin OR ddt OR "benzyl alcohol" OR "benzyl benzoate" OR "isopropyl myristate" OR clophenothane OR "isopropyl alcohol" OR "stearyl alcohol" OR "albendazole" OR "thiabendazole" OR levamisole OR diethylcarbamazine OR cotrimoxazole OR co-trimoxazole OR coconut OR anise OR ylang-ylang OR mayonnaise OR "petroleum jelly" OR "tub margarine" OR "herbal oil" OR vinegar OR "melted butter" "neem seed" OR azadirachtin OR grapefruit OR melaleuca OR "tee tree" OR lavender OR "natural product" OR eucalyptus OR quassia OR paw OR thymol OR electr* OR bug OR bust* OR "formic acid" OR air OR shaving OR bald
<b>#3</b>	<b>#1 AND #2</b>
<b>Web of Science</b>	
<b>#1</b>	TS= ("head lice" OR headlice OR pediculus OR pediculosis OR "head louse" OR "lice infestations/therapy" ) <i>Databases= WOS, CCC, KJD, MEDLINE, RSCI, SCIELO Timespan=All years Search language=Auto</i>
<b>#2</b>	TS=(treatment OR therapy OR intervention OR pediculid* OR insectid* OR shampoo OR crème rinse OR lotion OR mousse OR therapeutics OR ivermectin OR malathion OR permethrin OR dimeticone OR lindane OR crotamiton OR spinosad OR bioallethrin OR phenothrin OR "piperonyl butoxide" OR d-phenothrin OR carbaryl OR pyrethrin OR DDT OR "benzyl alcohol" OR "benzyl benzoate" OR "isopropyl myristate" OR clophenothane OR "isopropyl alcohol" OR "stearyl alcohol" OR "albendazole" OR "thiabendazole" OR levamisole OR diethylcarbamazine OR cotrimoxazole OR co-trimoxazole OR coconut OR anise OR Ylang-ylang OR mayonnaise OR "petroleum jelly" OR "tub margarine" OR "herbal oil" OR vinegar OR "melted butter" "neem seed" OR azadirachtin OR grapefruit OR melaleuca OR "tee tree" OR lavender OR "natural product" OR eucalyptus OR quassia OR paw OR thymol OR electr* OR bug OR bust* OR "formic acid" OR air OR shaving OR bald ) <i>Databases= WOS, CCC, KJD, MEDLINE, RSCI, SCIELO Timespan=All years Search language=Auto</i>
<b>#3</b>	<b>#1 AND #2</b>

<b>Cochrane Library</b>	
<b>#1</b>	("head lice" OR headlice OR pediculus OR pediculosis OR "head louse" OR "lice infestations")
<b>#2</b>	treatment OR therapy OR intervention OR therapeutics OR pediculicid* OR insecticid* OR shampoo OR crème rinse OR lotion OR mousse OR therapeutics OR ivermectin OR malathion OR permethrin OR dimeticone OR lindane OR crotamiton OR spinosad OR bioallethrin OR phenothrin OR piperonyl butoxide OR d-phenothrin OR carbaryl OR pyrethrin OR DDT OR benzyl alcohol OR benzyl benzoate OR isopropyl myristate OR clophenothane OR isopropyl alcohol OR stearyl alcohol OR albendazole OR thiabendazole OR levamisole OR diethylcarbamazine OR cotrimoxazole OR co-trimoxazole OR coconut OR anise OR Ylang-ylang OR mayonnaise OR petroleum jelly OR tub margarine OR herbal oil OR essential oil OR vinegar OR melted butter OR neem seed OR azadirachtin OR grapefruit OR melaleuca OR tee tree OR lavender OR natural product OR eucalyptus OR quassia OR paw OR thymol OR electric OR bug OR buster OR formic acid OR air OR shaving OR bald in Title Abstract Keyword - with Publication Year from 2002 to 2020, with Cochrane Library publication date to May 2020, in Trials (Word variations have been searched)
<b>#3</b>	<b>#1 AND #2</b>
<b>CINAHL (via EBSCOhost)</b>	
<b>#1</b>	"head lice" OR headlice OR pediculus OR pediculosis OR "head louse" OR "lice infestations"
<b>#2</b>	treatment OR therapy OR intervention OR therapeutics OR pediculicid* OR insecticid* OR shampoo OR crème rinse OR lotion OR mousse OR therapeutics OR ivermectin OR malathion OR permethrin OR dimeticone OR lindane OR crotamiton OR spinosad OR bioallethrin OR phenothrin OR piperonyl butoxide OR d-phenothrin OR carbaryl OR pyrethrin OR DDT OR benzyl alcohol OR benzyl benzoate OR isopropyl myristate OR clophenothane OR isopropyl alcohol OR stearyl alcohol OR albendazole OR thiabendazole OR levamisole OR diethylcarbamazine OR cotrimoxazole OR co-trimoxazole OR coconut OR anise OR Ylang-ylang OR mayonnaise OR petroleum jelly OR tub margarine OR herbal oil OR essential oil OR vinegar OR melted butter OR neem seed OR azadirachtin OR grapefruit OR melaleuca OR tee tree OR lavender OR natural product OR eucalyptus OR quassia OR paw OR thymol OR electric OR bug OR buster OR formic acid OR air OR shaving OR bald
<b>#3</b>	<b>#1 AND #2 AND</b> [Limiter: Randomized Controlled Trials]
<b>MEDLINE (via EBSCOhost)</b>	
<b>#1</b>	("head lice" OR headlice OR pediculus OR pediculosis OR "head louse" OR "lice infestations")
<b>#2</b>	( treatment OR therapy OR intervention OR therapeutics OR pediculicid* OR insecticid* OR shampoo OR crème rinse OR lotion OR mousse OR therapeutics OR ivermectin OR malathion OR permethrin OR dimeticone OR lindane OR crotamiton OR spinosad OR bioallethrin OR phenothrin OR piperonyl butoxide OR d-phenothrin OR carbaryl OR pyrethrin OR DDT OR benzyl alcohol OR benzyl benzoate OR isopropyl myristate OR clophenothane OR isopropyl alcohol OR stearyl alcohol OR albendazole OR thiabendazole OR levamisole OR diethylcarbamazine OR cotrimoxazole OR co-trimoxazole OR coconut OR anise OR Ylang-ylang OR mayonnaise OR petroleum jelly OR tub margarine OR herbal oil OR essential oil OR vinegar OR melted butter OR neem seed OR azadirachtin OR grapefruit OR melaleuca OR tee tree OR lavender OR natural product OR eucalyptus OR quassia OR paw OR thymol OR electric OR bug OR buster OR formic acid OR air OR shaving OR bald )
<b>#3</b>	<b>#1 AND #2</b> [Limiters - Publication Type: Clinical Trial, Clinical Trial, Phase II, Clinical Trial, Phase III, Clinical Trial, Phase IV, Controlled Clinical Trial, Randomized Controlled Trial]

**APPENDIX 2: PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol\***

Section and topic	Item No	Checklist item	Self-Evaluation
<b>ADMINISTRATIVE INFORMATION</b>			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review	Yes
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	Not applicable
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	<a href="#">CRD42019132524</a>
Authors:			
Contact	3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	Provided
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	Provided
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	Not applicable
Support:			
Sources	5a	Indicate sources of financial or other support for the review	Not applicable
Sponsor	5b	Provide name for the review funder and/or sponsor	Not applicable
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	Not applicable
<b>INTRODUCTION</b>			
Rationale	6	Describe the rationale for the review in the context of what is already known	Provided
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	Yes
<b>METHODS</b>			
Eligibility criteria	8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	Yes
Information sources	9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	Yes
Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	Yes
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	Yes
Selection process	11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	Yes
Data collection process	11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	Yes

Data items	12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	Yes
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	Yes
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	Yes
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	Yes
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as $I^2$ , Kendall's $\tau$ )	Yes
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	Yes
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	Yes
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	Yes

**\* It is strongly recommended that this checklist be read in conjunction with the PRISMA-P Explanation and Elaboration (cite when available) for important clarification on the items. Amendments to a review protocol should be tracked and dated. The copyright for PRISMA-P (including checklist) is held by the PRISMA-P Group and is distributed under a Creative Commons Attribution Licence 4.0.**

*From: Shamseer L, Moher D, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart L, PRISMA-P Group. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. BMJ. 2015 Jan 2;349(jan02 1):g7647.*