Search Exploration

The Search Exploration page allows you to generate search terms based on central concepts of your nest. Enter your Population, Interventions (and Comparators), and Outcomes (PICO) to generate a Boolean query that can be used on PubMed, and explore potential search results' abstracts, key terminology, and topics of interest to help construct your final search strategy. When complete, proceed to Lit Search and Run your Search.

How to Begin Search Exploring

1. Navigate to Search Exploration

Nest Home	
Dashboard Settings	
Literature Search	1/1
Other Sources	
Duplicate Review	

2. Enter PICO of Interest:

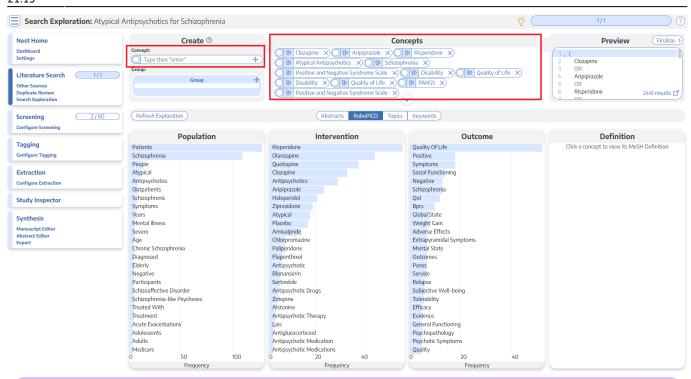
When you create a nest, you will have the option to add details about the Population, Interventions (and comparators), and Outcomes (PICO).

Imagine you are asking the Research Question: How do <u>atypical antipsychotics (I)</u> impact the <u>quality of life and disability (O)</u> in <u>adults with schizophrenia (P)</u>?

- 1. First, enter the Population (patients with schizophrenia), Interventions (atypical antipsychotics), and Outcomes (disability and quality of life) in the Concept bar under Create.
- 2. Enter each concept, then hit the Enter button, this will move them under Concepts.
- 3. Continue adding terms until you have enough terms to identify your specific topic area (**Recommended**: 2 to 5 terms per category).

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What is a **Comparator?** A comparator is the drug, device, or intervention that the main intervention is tested against. Typical comparator arms include placebo and standard of care (SOC). In the framework shown here, comparators can be included under interventions.

3. Edit PICO Details

When you have completed the tasks above, you will have unstructured terms of interest, but no grouping of terms and no information yet populated to the Abstracts, RoboPICO, Topic Modeling, and Keywords.

To proceed, click on "PICO detail" in the right to view, add, and group together PICO elements.

Search Exploration: Atypical A	ntipsychotics for Schizophreni	а					-Ŏ-	1/1	0
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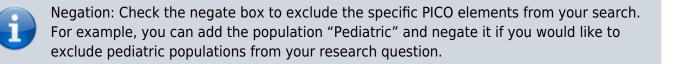
4. Group together PICO elements

1. Drag and drop the Group box from the right-side panel to the respective PICO section.

Search Exploration: Atypical A	ntipsychotics for Schizophrenia					-ŏ́-	1/1	?
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			Abstracts RabaD	CO Topics Kowwords				e Exploration Records

2. Group together sets of populations, interventions, or outcomes. This group will function like the OR operator in search strings. In this example, specific types of antipsychotic medications are grouped together

Search Exploration: Atypical A	Antipsychotics for Schizophrenia			-ŷ-	1/1 ?
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5. Run or Update Search Exploration

To populate Abstracts, RoboPICO, Topic Modeling, and Keywords:

1. In the PICO Detail, select "Update Exploration Records" in the bottom right hand corner.

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- 2. Review the query string to ensure that it is structured as intended.
- 3. Run the exploratory search. This may take a minute, since this will run a pre-search of PubMed.

Population Schizophrenia ×	Intervention Atypical Antipsychotics × Image: Closapine ×	O Delete (Positive and Negative Syndrome S ×)	Add a PICO element: Type Population Note Drop
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When you update search exploration, the references in your nest **will not change.** The records and data returned from this step will only be used for Search Exploration.

How to Interpret Search Exploration Findings

There are several ways to explore the references pulled by your exploratory search. The goal of this process should be to **expand or refine your search terms** so that they return as many records of interest while limiting irrelevant results.

Iterative Refinement: As you use the tools outlined below to add, remove, or restructure your terms, you should periodically re-run "Update Search Exploration", as this is **only run manually**, and not automatically updated.

1. Abstracts

Skim through abstracts retrieved through your search exploration terms.

Search Exploration

Search Exploration: At	ypical Antipsychotics for Schizophrenia				¥		
Nest Home Dashboard Settings Literature Search 1/1 Other Sources	Population Schizophrenia	Interventio (Atypical Antipsychotics) (Risperidone & Aripipra (Clozapine &		Outcome Quality of Life X Disability X Positive and Negative Syndrome S X Positive and Negative Syndrome S X Positive and Negative Syndrome S X	Add a PICO element Type Population Note	Negated Element	D C
Duplicate Review Search Exploration			stracts Robo	PICO Topics Keywords		PICO Detail Query E	Builder 🖪
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Screening 2/59 Configure Screening	Cost-effectiveness of first-		sychotic dru	gs: results from a randomised co	ntrolled trial in	Back	Next
Tagging						References	
Configure Tagging			5	 antipsychotic drugs over conventional (elative costs and value of treatment with 		Title	Year
Extraction onfigure Extraction	atypical antipsychotics in people w randomised controlled trial data of lower costs and higher quality-adju	vith schizophrenia. METHOD Cos conventional and atypical antips usted life-years (QALYs) than aty	effectiveness chotics in rout ical antipsyche	acceptability analysis integrated clinical ar ine practice. RESULTS <u>Conventional antip</u> itics and were more than 50% likely to be	nd economic osychotics had e cost-effective.	Cost-effectiveness of first- v. second- generation antipsychotic drugs: results from a randomised controlled trial in schizophrenia responding poorly to previous therapy.	2007
itudy Inspector	conclusions The primary and se gain in QALYs compared with atypi	, ,	onventional ai	i <mark>tipsychotics</mark> may be <mark>cost-saving and asso</mark>	ociated with a	A multicentre, randomized, naturalistic, open-label study between aripiprazole	
i <mark>ynthesis</mark> Manuscript Editor Jostract Editor Xport	Population/Problem Interv	vention Outcome				and standard of care in the management of community-treated schizophrenic patients Schizophrenia Trial of Aripiprazole: (STAR) study.	2007
						Neuroprotection: a therapeutic strategy to prevent deterioration associated with schizophrenia.	2007
						Prediction of remission as a combination of symptomatic and functional remission and adequate subjective well-being in 2960 patients with schizophrenia.	2006

The purpose of reviewing Abstracts should be to:

- 1. Confirm that your search is returning relevant records, and
- 2. Identify the key terms found in relevant records and adding them to your PICO terms.

2. RoboPICO

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Browse commonly-mentioned Populations, Interventions, and Outcomes from abstracts and titles. PICO elements are identified by RoboPICO, which is an open source fork of the models offered in RobotReviewer.

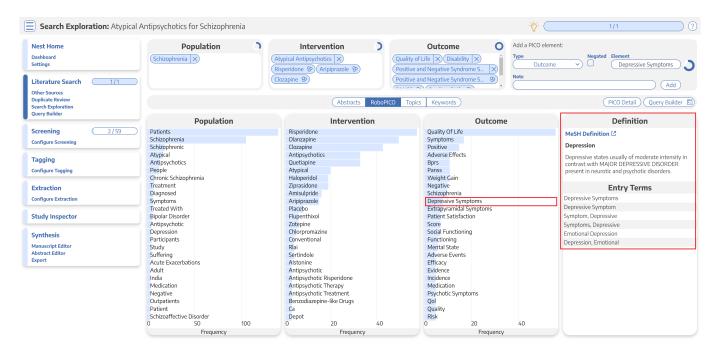
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	Population		Intervo	ention			Outcome		Definition
creening 2/59	Patients		Risperidone			Quality Of Life			Click a concept to view its MeSH Definition
onfigure Screening	Schizophrenia		Olanzapine			Symptoms			
	Schizophrenic		Clozapine			Positive			
agging	Atypical		Antipsychotics			Adverse Effects			
	Antipsychotics		Quetiapine			Bprs			
onfigure Tagging	People		Atypical			Panss			
	Chronic Schizophrenia		Haloperidol			Weight Gain			
extraction	Treatment		Ziprasidone			Negative			
onfigure Extraction	Diagnosed		Amisulpride			Schizophrenia			
onigure extraction	Symptoms		Aripiprazole			Depressive Sympton			
	Treated With		Placebo			Extrapyramidal Sym			
itudy Inspector	Bipolar Disorder		Flupenthixol			Patient Satisfaction			
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ynthesis	Depression		Chlorpromazine			Social Functioning			
, lanuscript Editor	Participants		Conventional			Functioning			
bstract Editor	Study		Rlai			Mental State			
xport	Suffering		Sertindole			Adverse Events			
	Acute Exacerbations		Alstonine			Efficacy			
	Adult		Antipsychotic			Evidence			
	India		Antipsychotic Risperidone			Incidence			
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	Patient		Ca			Quality			
	Schizoaffective Disorder	100	Depot 0 20	40		Risk 0 20		40	

The purpose of RoboPICO should be to:

- 1. Identify the most common topics of underlying abstracts, and
- 2. Identify terms that you should add to your PICO (which you can populate to "Add a PICO

Element" by clicking on the relevant row).

Clicking a row in the chart also initiates a strict MeSH lookup on the PICO element; not all extracted PICOs will correspond to MeSHs, but expect approximately half of lookups to succeed. In the event of a failed lookup, MeSH and Google search linkouts are offered.



What are MeSH? Medical Subject Headings (MeSH) are terms defined by the National Library of Medicine as a way to organize and search the content of medical literature. In some ways, MeSH are similar to Nested Knowledge tags, but unlike tags, MeSH are standardized.

3. Topics

Explore topics that appear most frequently among the references. References may belong to one or more topics, or none. Clicking a topic shows references belonging to the topic.

Search Exploration: Atypical A	ntipsychotics for Schizoph	renia				-ğ-	1/1	?
Nest Home Dashboard Settings Literature Search 1/1	Population	(Atypical Ant	tervention psychotics × (Aripiprazole *)	Quality of Life Positive and 1 Positive and 1	Dutcome Outome Image: Strate Syndrome S Image: Strate Syndrome S Image: Strate Syndrome S	Add a PICO eleme Type Outcome Note	Negated Element Treated with Olanza	apine) 🕽 Add
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Screening 2/59 Configure Screening		Versus Atypical	Amisulpride in Schizophren	ia			References By Topic Title	Year
Tagging Configure Tagging	Outcome Measures		c	lozapine and ZScale and	d ClirSwitching to #Treated wit	h Quet Domains	side effects and tardive dyskinesia. The SOHO (Schizophrenia Outpatient Health Outcome) study: implications for	1998
Extraction Configure Extraction		Aripiprazole for Schizophrenia	Conventional Agents				the treatment of schizophrenia. A multicentre, randomized, naturalistic, open-label study between aripiprazole	
Study Inspector	Atypical Neuroleptics	General Functioning	Months of Treatment	Schizophrenia in Remiss S	ion chizophrenia or fHealth care C	Prevention of Schiz	and standard of care in the management of community-treated schizophrenic patients Schizophrenia Trial of Aripiprazole: (STAR) study.	2007
Synthesis Manuscript Editor Abstract Editor Export	Depression in Schizophrenia			Subjective Well-being Do) oses of Typical Antipsycho New Gen	eraSecond Generatio	Pharmacoeconomic studies of atypical antipsychotic drugs for the treatment of schizophrenia.	1999
		Treatment Costs	Psychotic Disorders	Better Subjective Dic	hotomous Data We Calcula		Aripiprazole for schizophrenia. Atypical antipsychotic agents: a critical	2006
	Treated with Olanzapine	Weight Gain	Newer Antipsychotics	Evidence Suggests	Metabolic Long-acting Injectable _{Fewer F}	SyndrcPaliperidone Relaps Mechanisms o	[Neuroleptic malignant syndrome and atypical antipsychotics: a brief review].	2000 2008
							Antipsychotic medication, functional outcome and quality of life in schizophrenia: focus on amisulpride.	2010

These topics are derived from a Carrot2 clustering of abstract text to identify semantically similar concepts and group them.

4. Keywords and N-Grams

Explore the frequency of word combinations (n-grams) from abstracts or indexed descriptors (MeSH and/or journal keywords). While n-grams are presented in order of occurence in abstract text, descriptors are inherently unordered. Clicking a row shows unique references containing the combination.

Nest Home Dashboard ettings .iterature Search (1/1)	Population Schizophrenia ×	Intervention (Atypical Antipsychotics ×) (Risperidone &) (Aripiprazole &) (Clozapine &)	Quality of Life X (Quality of Life X) (Positive and Negativ (Positive and Negativ	Disability X re Syndrome S X re Syndrome S X Note	Negated Element Treated with Olanzapine
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Query Builder		Keywo	ds		Associated References
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Configure Screening	Rank	N-gram (1)	N-gram (2)	Frequency	
Fagging	1	Atypical	Antipsychotics	292	
Configure Tagging	2	Quality	Life	265	
Extraction	3	Patients	Schizophrenia	113	
Configure Extraction	4	Atypical	Antipsychotic	93	
Study Inspector	5	Rr	Ci	82	
ivnthesis	6	Negative	Symptoms	71	
Aanuscript Editor	7	Long	Term	68	
Abstract Editor Export	8	Adverse	Effects	67	
	9	Quality	Evidence	60	
	10	Antipsychotic	Drugs	57	
	11	Treatment	Schizophrenia	56	
	12	Low	Quality	51	
	13	Ν	Rr	47	
	14	Conventional	Antipsychotics	45	

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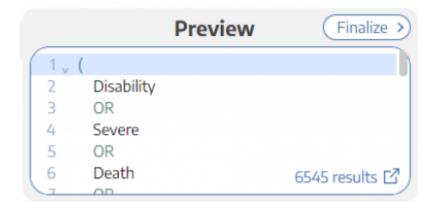
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		Keywo	ords		Associated References
Screening 2/59 Configure Screening	Columns (N): 2 V	Keywords/MeSHs	Abstract n-grams		Click a row to view associated references.
	Rank	Keyword (1)	Keyword (2)	Frequency	
Tagging	1	Antipsychotic Agents	Humans	156	
Configure Tagging	2	Humans	Schizophrenia	146	
Extraction	3	Antipsychotic Agents	Schizophrenia	144	
Configure Extraction	4	Humans	Quality Of Life	76	
Study Inspector	5	Antipsychotic Agents	Quality Of Life	75	
Synthesis	6	Quality Of Life	Schizophrenia	73	
Manuscript Editor	7	Adult	Humans	71	
Abstract Editor Export	8	Adult	Antipsychotic Agents	69	
	9	Female	Humans	65	
	10	Humans	Male	65	
	11	Antipsychotic Agents	Male	64	
	12	Adult	Schizophrenia	63	
	13	Antipsychotic Agents	Female	63	
	14	Female	Male	61	

Next Steps

When is Search Exploration finished?

You should continue iteratively refining your query until your Abstract, RoboPICO, Topics, and/or Keywords contain mostly relevant content and minimal extraneous records or concepts.

It is useful to **check the total number of records** returned from your query. To do so, view the number of records in the bottom right of the Preview screen, where you can also click to view the query on PubMed:



There is no 'right' number of records, but a good rule of thumb is to return:

- 1. A maximum of 200-300 records, with
- 2. An anticipated inclusion rate at or above 20%.

The reasoning behind this recommendation is that you want to capture relevant records while minimizing extra work during Screening (remember, your team will need to manually Screen all

results from your Search!). You can always add new/expanded Searches as you proceed, so achieving a high rate of inclusion should be prioritized over comprehensiveness.

What comes after Search Exploration?

When you are finished with Search Exploration, proceed to review, test, and finalize your search string in Lit Search!

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