# Embase.com

# Creating a basic search strategy

Open an empty MS Word document in which you will create your search strategy.

**Step 1: start a new element   
*(always, but only once per element)***

A new element is started when you start a search strategy, or when you want to combine a new key concept to your complete search with an AND operator. Any terms that you want to add with an OR to your existing search strategy is not a new elements but a new synonym.

Start an element by typing parentheses.

()

**Step 2: Fill the element with search terms**

**Step 2a: Adding thesaurus terms to the element   
*(possibly multiple times per element, but maybe not for all elements)***

Find thesaurus terms in your starting database that are relevant for this element. Do not include too broad thesaurus terms for specific elements. If you did not find thesaurus terms that are relevant for this element you can skip this step and immediately proceed into step 2c.

Copy the desired thesaurus term and paste it between the parentheses of the element. If the thesaurus term consists of more than one word single quotes are necessary. Any thesaurus term add to the search should be added at the start of the element. You can add thesaurus terms immediately at the start of the search creation or later in the process, but always combine all thesaurus terms at the start of the element.

('hip osteoarthritis')

For each thesaurus term, decide whether to explode the term or not, and add the field code for thesaurus terms. If you want to unclude most narrower terms in the tree the advise is to use the explode. If you want to include only a selection, then do not explode the broad term and add with an OR the specific narrower terms that you want to include.

For example as a broad term with narrower terms:

(osteoarthritis/exp)

For example as a broad term with only a selection of narrower terms:

(osteoarthritis/de OR 'hip osteoarthritis'/de)

**Step 2b: Add parentheses and field code for title/abstract   
*(always, but only once per element)***

In each element one set of terms to be searched in title and or abstracts is added. Add a set of parentheses with the code to search title and or abstract end of the element, directly before the closing parenthesis of the element.

('hip osteoarthritis'/de OR ():ab,ti)

**Step 2c: Add truncated single word synonyms or truncated phrases within the parentheses for title abstract   
*(possibly multiple times per element, but maybe not for all elements)***

Add truncated single word synonyms or phrases for which there are no variations found in the thesaurus to the title/abstract section between the parentheses for title abstract. For phrases for which there are no phrases we recommend to replace spaces with hyphens (do not use quotes, as these vary between databases, hyphens work the same in all databases). The order of terms in the title abstract section makes no difference on the effectiveness of the search. If you add a new term to an already existing search sequence, do not forget to add OR before the search term.

('hip osteoarthritis'/de OR (coxarth\* OR malum-coxae-senil\*):ab,ti)

**Step 2d: Prepare proximity statements for re-use   
*(always, but only once for the complete search strategy)***

Instead of searching with phrase variations the method recommends the use of proximity. By using clever combinations of search terms all relevant phrases can be retrieved. To prepare for proximity in the search strategy: at the top of the word document type syntax for proximity. Do not yet fill in the words so that it can be reused when necessary.

There are two frequently used options for proximity, a combination of two or three sets of search terms.

(() NEAR/3 ())

(() NEAR/3 () NEAR/3 ())

**Step 2e: Add a new proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

In the list of synonyms often many phrases are related to eachother and consist of combinations of terms in different variations. Instead of searching for each of these specific phrase proximity can be used to search for all known and unknown variations.

Copy the proximity statement from the top of the document into the parentheses of the title abstract section of the element. If there are already search terms in the title abstract section of this element, add an OR before your paste the proximity statement.

('hip osteoarthritis'/de OR (coxarth\* OR malum-coxae-senil\* OR (() NEAR/3 ())):ab,ti)

Within the proximity statement add the words that make up phrases in the synonyms list, making sure to group synonyms in the consecutive parentheses. The proximity works in two directions. There is no need to add to the proximity statement a term that is already search as a single word synonym.

('hip osteoarthritis'/de OR (coxarth\* OR malum-coxae-senil\* OR ((cox OR hip\*) NEAR/3 (arthrit\* OR arthros\* OR osteoarth\*))):ab,ti)

**Step 2f: Add new terms to an existing proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

If later in the process you find phrases that are related to already existing proximity statements, you can add terms into the parentheses of the existing proximity.

('hip osteoarthritis'/de OR (coxarth\* OR malum-coxae-senil\* OR ((cox OR hip\*) NEAR/3 (arthrit\* OR arthros\* OR osteoarth\* OR OA))):ab,ti)

**Step 3: Adding extra terms**

Each term that you want to add to the search with an OR operator should be added to an existing element. For this you choose step 2a, 2c, 2e or 2f. When you start creating the search do not add too many terms to the search yet, start with the most important ones to find the key articles, and add other terms later in the process.

If you want to add a term with an AND, most often this means a new element. In that case start with step 1.

# B. Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT. Add /mj to all emtree terms of that element (Ctrl-H / 🡪 /mj/)

('hip osteoarthritis'/mj/de NOT (coxarth\* OR ((cox OR hip\*) NEAR/3 (arthrit\* OR arthros\* OR osteoarth\*))):ab,ti) AND (...)

Cut and paste the search in the database, and click on *Show all abstracts*

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search strategy between parentheses and preceded by NOT. Change ab,ti for that element to ti.

((coxarth\* OR ((cox OR hip\*) NEAR/3 (arthrit\* OR arthros\* OR osteoarth\*))):ti) AND (...) NOT ('hip osteoarthritis'/exp)

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search

# Ovid Embase

# A. Creating a basic search strategy

Open an empty MS Word document in which you will create your search strategy.

**Step 1: start a new element   
*(always, but only once per element)***

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Start an element by typing parentheses.

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**Step 2: Fill the element with search terms**

**Step 2a: Adding thesaurus terms to the element   
*(possibly multiple times per element, but maybe not for all elements)***

Find thesaurus terms in your starting database that are relevant for this element. Do not include too broad thesaurus terms for specific elements. If you did not find thesaurus terms that are relevant for this element you can skip this step and immediately proceed into step 2c.

Copy the desired thesaurus term and paste it between the parentheses of the element. If the thesaurus term contains the word "use" (for example drug use) or the term contain parentheses, quotes are necessary around the thesaurus term. Any thesaurus term add to the search should be added at the start of the element. You can add thesaurus terms immediately at the start of the search creation or later in the process, but always combine all thesaurus terms at the start of the element.

(hip osteoarthritis)

For each thesaurus term, decide whether to explode the term or not, and add the field code for thesaurus terms. If you want to unclude most narrower terms in the tree the advise is to use the explode. If you want to include only a selection, then do not explode the broad term and add with an OR the specific narrower terms that you want to include.

For example as a broad term with narrower terms:

(exp osteoarthritis/)

For example as a broad term with only a selection of narrower terms:

(osteoarthritis/ OR hip osteoarthritis/)

**Step 2b: Add parentheses and field code for title/abstract   
*(always, but only once per element)***

In each element one set of terms to be searched in title and or abstracts is added. Add a set of parentheses with the code to search title and or abstract end of the element, directly before the closing parenthesis of the element.

(hip osteoarthritis/ OR ().ab,ti.)

**Step 2c: Add truncated single word synonyms or truncated phrases within the parentheses for title abstract   
*(possibly multiple times per element, but maybe not for all elements)***

Add truncated single word synonyms or phrases for which there are no variations found in the thesaurus to the title/abstract section between the parentheses for title abstract. For phrases for which there are no phrases we recommend to replace spaces with hyphens (do not use quotes, as these vary between databases, hyphens work the same in all databases). The order of terms in the title abstract section makes no difference on the effectiveness of the search. If you add a new term to an already existing search sequence, do not forget to add OR before the search term.

(hip osteoarthritis/ OR (coxarth\* OR malum-coxae-senil\*).ab,ti.)

**Step 2d: Prepare proximity statements for re-use   
*(always, but only once for the complete search strategy)***

Instead of searching with phrase variations the method recommends the use of proximity. By using clever combinations of search terms all relevant phrases can be retrieved. To prepare for proximity in the search strategy: at the top of the word document type syntax for proximity. Do not yet fill in the words so that it can be reused when necessary.

There are two frequently used options for proximity, a combination of two or three sets of search terms.

(() ADJ3 ())

(() ADJ3 () ADJ3 ())

**Step 2e: Add a new proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

In the list of synonyms often many phrases are related to eachother and consist of combinations of terms in different variations. Instead of searching for each of these specific phrase proximity can be used to search for all known and unknown variations.

Copy the proximity statement from the top of the document into the parentheses of the title abstract section of the element. If there are already search terms in the title abstract section of this element, add an OR before your paste the proximity statement.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\* OR (() ADJ3 ())).ab,ti.)

Within the proximity statement add the words that make up phrases in the synonyms list, making sure to group synonyms in the consecutive parentheses. The proximity works in two directions. There is no need to add to the proximity statement a term that is already search as a single word synonym.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\* OR ((hip\* OR cox) ADJ3 (arthrit\* OR arthros\* OR osteoarth\*))).ab,ti.)

**Step 2f: Add new terms to an existing proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

If later in the process you find phrases that are related to already existing proximity statements, you can add terms into the parentheses of the existing proximity.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\* OR ((hip\* OR cox) ADJ3 (arthrit\* OR arthros\* OR osteoarth\* OR OA))).ab,ti.)

**Step 3: Adding extra terms**

Each term that you want to add to the search with an OR operator should be added to an existing element. For this you choose step 2a, 2c, 2e or 2f.

If you want to add a term with an AND, most often this means a new element. In that case start with step 1.

# Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT. Add an \* before each emtree term of that element.

(exp \*hip osteoarthritis/ NOT (coxarth\* OR ((cox OR hip\*) ADJ3 (arthrit\* OR arthros\* OR osteoarth\*))).ab,ti.) AND (...)

Cut and paste the search in the database and click the button to show all abstracts

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search strategy between parentheses and preceded by NOT. Replace ab,ti with ti there.

((coxarth\* OR ((cox OR hip\*) ADJ3 (arthrit\* OR arthros\* OR osteoarth\*))).ti.) AND (...) NOT (exp hip osteoarthritis/)

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search

# Ovid Medline

# A. Creating a basic search strategy

Open an empty MS Word document in which you will create your search strategy.

**Step 1: start a new element   
*(always, but only once per element)***

A new element is started when you start a search strategy, or when you want to combine a new key concept to your complete search with an AND operator. Any terms that you want to add with an OR to your existing search strategy is not a new elements but a new synonym.

Start an element by typing parentheses.

()

**Step 2: Fill the element with search terms**

**Step 2a: Adding thesaurus terms to the element   
*(possibly multiple times per element, but maybe not for all elements)***

Find thesaurus terms in your starting database that are relevant for this element. Do not include too broad thesaurus terms for specific elements. If you did not find thesaurus terms that are relevant for this element you can skip this step and immediately proceed into step 2c.

Copy the desired thesaurus term and paste it between the parentheses of the element. If the thesaurus term contains the word "use" (for example drug use) or the term contain parentheses, quotes are necessary around the thesaurus term. Any thesaurus term add to the search should be added at the start of the element. You can add thesaurus terms immediately at the start of the search creation or later in the process, but always combine all thesaurus terms at the start of the element.

(osteoarthritis, hip)

For each thesaurus term, decide whether to explode the term or not, and add the field code for thesaurus terms. If you want to unclude most narrower terms in the tree the advise is to use the explode. If you want to include only a selection, then do not explode the broad term and add with an OR the specific narrower terms that you want to include.

For example as a broad term with narrower terms:

(exp osteoarthritis/)

For example as a broad term with only a selection of narrower terms:

(osteoarthritis/ OR osteoarthritis, hip/)

**Step 2b: Add parentheses and field code for title/abstract   
*(always, but only once per element)***

In each element one set of terms to be searched in title and or abstracts is added. Add a set of parentheses with the code to search title and or abstract end of the element, directly before the closing parenthesis of the element.

(osteoarthritis, hip/ OR ().ab,ti.)

**Step 2c: Add truncated single word synonyms or truncated phrases within the parentheses for title abstract   
*(possibly multiple times per element, but maybe not for all elements)***

Add truncated single word synonyms or phrases for which there are no variations found in the thesaurus to the title/abstract section between the parentheses for title abstract. For phrases for which there are no phrases we recommend to replace spaces with hyphens (do not use quotes, as these vary between databases, hyphens work the same in all databases). The order of terms in the title abstract section makes no difference on the effectiveness of the search. If you add a new term to an already existing search sequence, do not forget to add OR before the search term. In the example below we use the phrase malum coxae senilis, which is only found in the Emtree thesaurus of Embase. In the MeSH thesaurus no phrases without variations are found for hip osteoarthritis.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\*).ab,ti.)

**Step 2d: Prepare proximity statements for re-use   
*(always, but only once for the complete search strategy)***

Instead of searching with phrase variations the method recommends the use of proximity. By using clever combinations of search terms all relevant phrases can be retrieved. To prepare for proximity in the search strategy: at the top of the word document type syntax for proximity. Do not yet fill in the words so that it can be reused when necessary.

There are two frequently used options for proximity, a combination of two or three sets of search terms.

(() ADJ3 ())

(() ADJ3 () ADJ3 ())

**Step 2e: Add a new proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

In the list of synonyms often many phrases are related to eachother and consist of combinations of terms in different variations. Instead of searching for each of these specific phrase proximity can be used to search for all known and unknown variations.

Copy the proximity statement from the top of the document into the parentheses of the title abstract section of the element. If there are already search terms in the title abstract section of this element, add an OR before your paste the proximity statement.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\* OR (() ADJ3 ())).ab,ti.)

Within the proximity statement add the words that make up phrases in the synonyms list, making sure to group synonyms in the consecutive parentheses. The proximity works in two directions. There is no need to add to the proximity statement a term that is already search as a single word synonym.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\* OR ((hip\*) ADJ3 (osteoarthrit\*))).ab,ti.)

**Step 2f: Add new terms to an existing proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

If later in the process you find phrases that are related to already existing proximity statements, you can add terms into the parentheses of the existing proximity.

(osteoarthritis, hip/ OR (coxarth\* OR malum-coxae-senil\* OR ((hip\*) ADJ3 (osteoarthrit\* OR osteo-arthrit\* OR OA))).ab,ti.)

**Step 3: Adding extra terms**

Each term that you want to add to the search with an OR operator should be added to an existing element. For this you choose step 2a, 2c, 2e or 2f.

If you want to add a term with an AND, most often this means a new element. In that case start with step 1.

# Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT. Add an \* before each mesh term of that element.

(exp \*osteoarthritis, hip/ NOT (Coxarthr\* OR ((hip\*) ADJ3 (Osteoarthrit\*))).ab,ti.) AND (...)

Cut and paste the search in the database and click the button to show all abstracts

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search between parentheses and preceded by NOT. Replace ab,ti with ti for that element

**Add AND humans/ to ignore unindexed references in this step that do not have MeSH terms**

((Coxarthr\* OR ((hip\*) ADJ3 (Osteoarthrit\*))).ti.) AND (...) NOT (exp osteoarthritis, hip/) AND humans/

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search.

## PubMed

# A. Creating a basic search strategy

Open an empty MS Word document in which you will create your search strategy.

**Step 1: start a new element   
*(always, but only once per element)***

A new element is started when you start a search strategy, or when you want to combine a new key concept to your complete search with an AND operator. Any terms that you want to add with an OR to your existing search strategy is not a new elements but a new synonym.

Start an element by typing parentheses.

()

**Step 2: Fill the element with search terms**

**Step 2a: Adding thesaurus terms to the element   
*(possibly multiple times per element, but maybe not for all elements)***

Find thesaurus terms in your starting database that are relevant for this element. Do not include too broad thesaurus terms for specific elements. If you did not find thesaurus terms that are relevant for this element you can skip this step and immediately proceed into step 2c.

Copy the desired thesaurus term and paste it between the parentheses of the element. Any thesaurus term add to the search should be added at the start of the element. You can add thesaurus terms immediately at the start of the search creation or later in the process, but always combine all thesaurus terms at the start of the element.

(osteoarthritis, hip)

For each thesaurus term, decide whether to explode the term or not, and add the field code for thesaurus terms. If you want to unclude most narrower terms in the tree the advise is to use the explode. If you want to include only a selection, then do not explode the broad term and add with an OR the specific narrower terms that you want to include.

For example as a broad term with narrower terms:

(osteoarthritis[mh])

For example as a broad term with only a selection of narrower terms:

(osteoarthritis[mh:noexp] OR osteoarthritis, hip[mh])

**Step 2b: Add parentheses for title/abstract section  
*(always, but only once per element)***

In each element one set of terms to be searched in title and or abstracts is added. Add a set of parentheses directly before the closing parenthesis of the element. These parentheses are necessary for the optimization method in section B.

(osteoarthritis, hip[mh] OR ())

**Step 2c: Add truncated single word synonyms or truncated phrases within the parentheses for title abstract and add [tiab] behind them  
*(possibly multiple times per element, but maybe not for all elements)***

Add truncated single word synonyms or phrases for which there are no variations found in the thesaurus to the title/abstract section between the parentheses for title abstract. For phrases for which there are no phrases we recommend to replace spaces with hyphens (do not use quotes, as these vary between databases, hyphens work the same in all databases). The order of terms in the title abstract section makes no difference on the effectiveness of the search. If you add a new term to an already existing search sequence, do not forget to add OR before the search term. In the example below we use the phrase malum coxae senilis, which is only found in the Emtree thesaurus of Embase. In the MeSH thesaurus no phrases without variations are found for hip osteoarthritis. Be aware that in PubMed truncation can only be placed at the end of the phrase.

(osteoarthritis, hip[mh] OR (Coxarthr\*[tiab] OR malum-coxae-senil\*[tiab]))

**Step 2d: Prepare AND combinations for re-use   
*(always, but only once for the complete search strategy)***

Instead of searching with phrase variations the method recommends the use of proximity. In the interface of PubMed, proximity operators are not available. We therefore recommend to use AND combinations. By using clever combinations of search terms all relevant phrases can be retrieved. To prepare for proximity in the search strategy: at the top of the word document type syntax for proximity. Do not yet fill in the words so that it can be reused when necessary.

There are two frequently used options for proximity, a combination of two or three sets of search terms.

(() AND ())

(() AND () AND ())

**Step 2e: Add a new proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

In the list of synonyms often many phrases are related to eachother and consist of combinations of terms in different variations. Instead of searching for each of these specific phrase sets of terms combined with AND can be used to search for all known and unknown variations.

Copy the proximity statement from the top of the document into the parentheses of the title abstract section of the element. If there are already search terms in the title abstract section of this element, add an OR before your paste the proximity statement. If these AND combinations result in too much noise, use phrases instead (see step 2c).

(osteoarthritis, hip[mh] OR (Coxarthr\*[tiab] OR malum-coxae-senil\*[tiab] OR (() AND ())))

Within the proximity statement add the words that make up phrases in the synonyms list, making sure to group synonyms in the consecutive parentheses. The proximity works in two directions. There is no need to add to the proximity statement a term that is already search as a single word synonym.

(osteoarthritis, hip[mh] OR (Coxarthr\*[tiab] OR malum-coxae-senil\*[tiab] OR ((hip\*[tiab]) AND (osteoarthrit\*[tiab]))))

If these AND combinations are likely to result in too much noise, use phrases instead (as described in step 2c). But make sure that all relevant phrases are then added to the search strategy:

(osteoarthritis, hip[mh] OR (Coxarthr\*[tiab] OR malum-coxae-senil\*[tiab] OR hip-osteoarthr\*[tiab] OR osteoarthritis-of-hip\*[tiab] OR osteoarthritis-of-the-hip\*[tiab]))

**Step 2f: Add new terms to an existing AND combination   
*(possibly multiple times per element, but maybe not for all elements)***

If later in the process you find phrases that are related to already existing proximity statements, you can add terms into the parentheses of the existing proximity.

(osteoarthritis, hip/ OR (Coxarthr\* OR ((hip\*) ADJ3 (osteoarthrit\* OR osteo-arthrit\* OR OA))).ab,ti.)**Step 3: Adding extra terms**

Each term that you want to add to the search with an OR operator should be added to an existing element. For this you choose step 2a, 2c, 2e or 2f.

If you want to add a term with an AND, most often this means a new element. In that case start with step 1.

# B. Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT. Replace [mh] with [mj] for that element.

("osteoarthritis, hip"[mj] NOT (Coxarthr\*[tiab] OR ((hip\*[tiab]) AND (osteoarthr\*[tiab])))) AND (...)

Cut and paste the search in the database and select display abstract from the drop down menu

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search strategy between parentheses and preceded by NOT. Replace [tiab] with [ti] for that element.

**Add AND humans[mh] to ignore unindexed references in this step that do not have MeSH terms**

*Sensitive:*

((Coxarthr\*[ti] OR ((hip\*[ti]) AND (osteoarthr\*[ti])))) AND (...) NOT ("osteoarthritis, hip"[mh]) AND humans[mh]

*Specific:*

((Coxarthr\*[ti] OR Hip Osteoarthrit\*[ti] OR Osteoarthritis Of Hip\*[ti])) AND (...) NOT ("osteoarthritis, hip"[mh]) AND humans[mh]

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search.

## EBSCOhost Medline

# Creating a basic search strategy

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Start an element by typing parentheses.

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**Step 2: Fill the element with search terms**

**Step 2a: Adding thesaurus terms to the element   
*(possibly multiple times per element, but maybe not for all elements)***

Find thesaurus terms in your starting database that are relevant for this element. Do not include too broad thesaurus terms for specific elements. If you did not find thesaurus terms that are relevant for this element you can skip this step and immediately proceed into step 2c.

Copy the desired thesaurus term and paste it between the parentheses of the element. If the thesaurus term consists of more than one word single quotes are necessary. Any thesaurus term add to the search should be added at the start of the element. You can add thesaurus terms immediately at the start of the search creation or later in the process, but always combine all thesaurus terms at the start of the element.

(osteoarthritis, hip)

For each thesaurus term, decide whether to explode the term or not, and add the field code for thesaurus terms. If you want to unclude most narrower terms in the tree the advise is to use the explode. If you want to include only a selection, then do not explode the broad term and add with an OR the specific narrower terms that you want to include.

For example as a broad term with narrower terms:

(MH osteoarthritis+)

For example as a broad term with only a selection of narrower terms:

(MH osteoarthritis OR MH osteoarthritis, hip)

**Step 2b: Add parentheses and field code for title/abstract   
*(always, but only once per element)***

In each element one set of terms to be searched in title and or abstracts is added. Add a set of parentheses with the code to search title and or abstract end of the element, directly before the closing parenthesis of the element.

(MH osteoarthritis+ OR AB())

**Step 2c: Add truncated single word synonyms or truncated phrases within the parentheses for title abstract   
*(possibly multiple times per element, but maybe not for all elements)***

Add truncated single word synonyms or phrases for which there are no variations found in the thesaurus to the title/abstract section between the parentheses for title abstract. For phrases for which there are no phrases we recommend to replace spaces with hyphens (do not use quotes, as these vary between databases, hyphens work the same in all databases). The order of terms in the title abstract section makes no difference on the effectiveness of the search. If you add a new term to an already existing search sequence, do not forget to add OR before the search term.

(MH "osteoarthritis, hip+" OR AB(Coxarthr\*))

**Step 2d: Prepare proximity statements for re-use   
*(always, but only once for the complete search strategy)***

Instead of searching with phrase variations the method recommends the use of proximity. By using clever combinations of search terms all relevant phrases can be retrieved. To prepare for proximity in the search strategy: at the top of the word document type syntax for proximity. Do not yet fill in the words so that it can be reused when necessary.

There are two frequently used options for proximity, a combination of two or three sets of search terms.

(() N3 ())

(() N3 () N3 ())

**Step 2e: Add a new proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

In the list of synonyms often many phrases are related to eachother and consist of combinations of terms in different variations. Instead of searching for each of these specific phrase proximity can be used to search for all known and unknown variations.

Copy the proximity statement from the top of the document into the parentheses of the title abstract section of the element. If there are already search terms in the title abstract section of this element, add an OR before your paste the proximity statement.

(MH "osteoarthritis, hip+" AB(Coxarthr\* OR (() N3 ())))

Within the proximity statement add the words that make up phrases in the synonyms list, making sure to group synonyms in the consecutive parentheses. The proximity works in two directions. There is no need to add to the proximity statement a term that is already search as a single word synonym.

(MH "osteoarthritis, hip+" OR AB(Coxarthr\* OR ((hip\*) N3 (osteoarthrit\*))))

**Step 2f: Add new terms to an existing proximity statement   
*(possibly multiple times per element, but maybe not for all elements)***

If later in the process you find phrases that are related to already existing proximity statements, you can add terms into the parentheses of the existing proximity.

(MH "osteoarthritis, hip+" OR AB(Coxarthr\* OR ((hip\* OR cox) N3 (osteoarthrit\* OR arthritis\* OR OA))))

**Step 3: Adding extra terms**

Each term that you want to add to the search with an OR operator should be added to an existing element. For this you choose step 2a, 2c, 2e or 2f. When you start creating the search do not add too many terms to the search yet, start with the most important ones to find the key articles, and add other terms later in the process.

If you want to add a term with an AND, most often this means a new element. In that case start with step 1.

# B. Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT. Replace the field code for all thesaurus terms of that element (Ctrl-H MH 🡪 MM)

(MM "osteoarthritis, hip+" NOT AB(Coxarthr\* OR ((hip\* OR cox) N3 (osteoarthrit\* OR arthritis\* OR OA)))) AND (…)

Cut and paste the search in the database, and display the abstract

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search strategy between parentheses and preceded by NOT. Change ab,ti for that element to ti.

(AB(Coxarthr\* OR ((hip\* OR cox) N3 (osteoarthrit\* OR arthritis\* OR OA)))) AND (…) NOT (MH "osteoarthritis, hip+")

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search

When optimization is done, copy all terms behind AB (), and paste them with the field code TI ().

## ProQuest Medline (untested)

# Basic search strategy

Open an empty MS Word document in which you will create your search strategy.

Start an element by typing parentheses

()

Copy the desired thesaurus term and paste it between the parentheses of the element.

(osteoarthritis, hip)

Decide whether to explode the term or not, and add the field code for thesaurus terms. Paste all highly relevant thesaurus terms before beginning a title/abstract search.

(mesh.exact.explode(osteoarthritis, hip))

Add parentheses and field code for title/abstract

(mesh.exact.explode(osteoarthritis, hip) OR AB,TI())

Add truncated single word synonyms from the list of entry terms to the title/abstract section

(mesh.exact.explode(osteoarthritis, hip) OR AB,TI(Coxarthr\*))

Somewhere in the word document type syntax for proximity, without filling in the words so that it can be reused when necessary

(() N/3 ())

Within the title/abstract section type OR and then copy paste the proximity statement

(mesh.exact.explode(osteoarthritis, hip) OR AB,TI(Coxarthr\* OR (() N/3 ())))

Within the proximity statement add the words that make up phrases in the entry terms, making sure to group synonyms in the consecutive parentheses

(mesh.exact.explode(osteoarthritis, hip) OR AB,TI(Coxarthr\* OR ((hip\*) N/3 (Osteoarthrit\*))))

Repeat this process for each element. Combine the different elements in the search in a single line search with AND.

# Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT.

(mesh.exact.explode(osteoarthritis, hip) NOT AB,TI(Coxarthr\* OR ((hip\*) N/3 (Osteoarthrit\*)))) AND (...)

Cut and paste the search in the database and click the button to show all abstracts

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search strategy between parentheses and preceded by NOT.

**Add AND MESH#(humans) to ignore unindexed references in this step that do not have MeSH terms**

(AB,TI(Coxarthr\* OR ((hip\*) N/3 (Osteoarthrit\*)))) AND (...) NOT (mesh.exact.explode(osteoarthritis, hip)) AND mesh.exact.explode(humans)

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search.

## ProQuest Embase (untested)

# Basic search strategy

Open an empty MS Word document in which you will create your search strategy.

Start an element by typing parentheses

()

Copy the desired thesaurus term and paste it between the parentheses of the element.

(hip osteoarthritis)

Decide whether to explode the term or not, and add the field code for thesaurus terms. Paste all highly relevant thesaurus terms before beginning a title/abstract search.

(emb.exact.explode(hip osteoarthritis))

Add parentheses and field code for title/abstract

(emb.exact.explode(hip osteoarthritis) OR AB,TI())

Add truncated single word synonyms from the list of entry terms to the title/abstract section

(emb.exact.explode(hip osteoarthritis) OR AB,TI(Coxarthr\*))

Somewhere in the word document type syntax for proximity, without filling in the words so that it can be reused when necessary

(() N/3 ())

Within the title/abstract section type OR and then copy paste the proximity statement

(emb.exact.explode(hip osteoarthritis) OR AB,TI(Coxarthr\* OR (() N/3 ())))

Within the proximity statement add the words that make up phrases in the entry terms, making sure to group synonyms in the consecutive parentheses

(emb.exact.explode(hip osteoarthritis) OR AB,TI(Coxarthr\* OR ((cox OR hip\*) N/3 (arthrit\* OR arthros\* OR osteoarthrit\*))))

Repeat this process for each element. Combine the different elements in the search in a single line search with AND.

# Optimization (to be done in the second workshop)

Make a temporary copy of your complete search for optimization below your current search strategy

In that copy, for one of the elements, replace the OR between the last thesaurus term and the opening parenthesis for title/abstract search with NOT.

(emb.exact.explode(hip osteoarthritis) NOT AB,TI(Coxarthr\* OR ((cox OR hip\*) N/3 (arthrit\* OR arthros\* OR osteoarthrit\*)))) AND (...)

Cut and paste the search in the database and click the button to show all abstracts

Now scan titles and abstracts for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Make a copy of the new search strategy. Now for that element, remove all thesaurus terms and add them to the end of the search strategy between parentheses and preceded by NOT.

**Add AND MESH#(humans) to ignore unindexed references in this step that do not have MeSH terms**

(AB,TI(Coxarthr\* OR ((cox OR hip\*) N/3 (arthrit\* OR arthros\* OR osteoarthrit\*)))) AND (...) NOT (emb.exact.explode(hip osteoarthritis)) AND emb.exact.explode(humans)

Now scan the list of thesaurus terms for relevant terms that are not yet highlighted. Add them to the current search strategy, closely observing the parentheses. And repeat the process several times for this element.

Repeat this process for the other elements in your search.