Searching the literature for your RS1

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What we will cover...

To be able to carry out a search for relevant literature on your RS1 topic using the databases, Scopus and Medline.

- To break your Research Question down into concepts and identify keywords for each concept
- To combine the keywords using the AND and OR operators to produce a search strategy
- To apply the search strategy to Scopus and Medline, using appropriate limits and truncation.
- To incorporate Medical Subject Headings (MeSH) into the Medline search strategy.
- To link from your search results through to the full papers
What are we looking for?

- Journal articles
  - Research articles: short, in-depth, papers that report on new research on specific topics.
  - Reports of trials (RCTs).
  - Case reports.
  - Review articles (clinical reviews; systematic reviews).
Meta-Analysis
Systematic Review
Randomised Control Trial (RCT)
Cohort Studies
Case Control Studies
Case Series/Case Reports
Animal research/Laboratory studies

Quality of Evidence
How to Stop Mass Shootings

Mental Health Services for Medical Students — Time to Act

Outbreaks in a Rapidly Changing Central Africa — Lessons from Ebola

Murmurs of Politics and Economics
Randomized controlled trial: (RCT) A study in which people are allocated at random (by chance alone) to receive one of several clinical interventions. One of these interventions is the standard of comparison or control. The control may be a standard practice, a placebo ("sugar pill"), or no intervention at all.

Medical Definition of Randomized controlled trial - MedicineNet
What is a systematic review?

A systematic review summarises the results of available carefully designed healthcare studies (controlled trials) and provides a high level of evidence on the effectiveness of healthcare interventions. Judgments may be made about the evidence and inform recommendations for healthcare.

These reviews are complicated and depend largely on what clinical trials are available, how they were carried out (the quality of the trials) and the health outcomes that were measured. Review authors pool numerical data about effects of the treatment through a process called meta-analyses. Then authors assess the evidence for any benefits or harms from those treatments. In this way, systematic reviews are able to summarise the existing clinical research on a topic.

Cochrane Consumer Network. What is a systematic review? http://consumers.cochrane.org/what-systematic-review
Where will we be looking?

- **Databases: Scopus and Medline**
  - **SCOPUS indexes** 20,000+ journals (life sciences, social sciences, physical sciences and health sciences)
  - **MEDLINE indexes** 5,600+ biomedical journals
  - All databases allow you to link out to the full paper/article (if available at Liverpool)

[is it @ Liverpool?](#)  [Get Full Text](#)
Why search more than one database?

- The wider you search, the more you’ll find…

- Scopus
- Medline
- Web of Science
Access databases (and more) through the Medicine Library Guide
University Library

- Engineering
- English
- Environmental Sciences
- Geography
- Health Sciences
- History
- Irish Studies
- Law
- Life Sciences
- Marketing and Operations
- Mathematical Sciences
- Medicine
- Modern Languages and Cultures
- Music
- Organisation and Management
- Philosophy
University Library

Medicine: Home

Databases for Medicine

- ClinicalKey Medical Education
  ClinicalKey Medical Education provides digital access to over 200 cross-searchable medical textbooks, thousands of images and hundreds of videos. Users also have access to a range of study tools, including the ability to annotate, make notes and access the books offline. ClinicalKey, with its broader range of titles and enhanced study tool features, expands on and enhances the access to 18 medical e-textbooks previously available to University of Liverpool users via Elsevier eLibrary.

- MEDLINE
- PsycINFO
- PubMed
- Scopus
- UpToDate
- Visible Body
- Web of Science

ClinicalKey Medical Education Guides

- ClinicalKey Medical Education Quick Reference Guide
- ClinicalKey Medical Education How to Register
- ClinicalKey Medical Education How To Search
- ClinicalKey Medical Education How to Launch Study Tools
- ClinicalKey Medical Education How to Make Notes in Study Tools
- ClinicalKey Medical Education How to Make Highlights in Study Tools

RS1 documents
What do you see? Fruit?

Be more specific - narrow down to the detail: Apples? Grapes? Pears?

Think broadly – look widely at the topic and what else fits into it: e.g. health, nutrition…
Turning your question into a search strategy

- Identify the key concepts or components of your question
- Make a list of keywords for each concept (no substitute for background reading here)
- There is a lot of variation in terminology, so it's important to include similar or related terms: cancer, tumor, tumour, neoplasm….
Sustained reduction in the incidence of type 2 diabetes by lifestyle intervention: follow-up of the Finnish Diabetes Prevention Study

Abstract

Background: Lifestyle interventions can prevent the deterioration of impaired glucose tolerance to manifest type 2 diabetes, at least as long as the intervention continues. In the extended follow-up of the Finnish Diabetes Prevention Study, we assessed the extent to which the originally-achieved lifestyle changes and risk reduction remain after discontinuation of active counselling. Methods: Overweight, middle-aged men (n=172) and women (n=350) with impaired glucose tolerance were randomly assigned to intensive lifestyle intervention or control group. After a median of 4 years of active intervention period, participants who were still free of diabetes were further followed up for a median of 3 years, with median total follow-up of 7 years. Diabetes incidence, bodyweight, physical activity, and dietary intakes of fat, saturated fat, and fibre were measured. Findings: During the total follow-up, the incidence of type 2 diabetes was 4.3 and 7.4 per 100 person-years in the intervention and control group, respectively (log-rank test p=0.0001), indicating 43% reduction in relative risk. The risk reduction was related to the success in achieving the intervention goals of weight loss, reduced intake of total and saturated fat and increased intake of dietary fibre, and increased physical activity. Beneficial lifestyle changes achieved by participants in the intervention group were maintained after the discontinuation of the intervention, and the corresponding incidence rates during the post-intervention follow-up were 4.6 and 7.2 (p=0.0401), indicating 36% reduction in relative risk. Interpretation: Lifestyle intervention in people at high risk for type 2 diabetes resulted in sustained lifestyle changes and a reduction in diabetes incidence, which remained after the individual lifestyle counselling was stopped. © 2006 Elsevier Ltd. All rights reserved.
Research question: examples

 Is Fidaxomicin or Vancomycin more effective in preventing the recurrence of Clostridium Difficile infection in patients?

 Can virtual reality improve anatomy education for medical students?

 What evidence is there that lifestyle interventions are effective in reducing the risk of obese persons developing type 2 diabetes?

 What effect does caring for a stroke patient have on the quality of life of the carer?
Is **Fidaxomycin** or **Vancomycin** more effective in preventing the **recurrence** of **Clostridium Difficile** in patients?

<table>
<thead>
<tr>
<th>Concept 1 <strong>and</strong></th>
<th>Concept 2 <strong>and</strong></th>
<th>Concept 3 <strong>and</strong></th>
<th>Concept 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clostridium Difficile</strong> <strong>or</strong> <strong>Clostridium infections</strong></td>
<td><strong>Fidaxomycin</strong></td>
<td><strong>Vancomycin</strong></td>
<td><strong>Recurrence</strong></td>
</tr>
</tbody>
</table>
Can **virtual reality** improve **anatomy education** for **medical students**?

<table>
<thead>
<tr>
<th>Concept 1 <strong>and</strong></th>
<th>Concept 2 <strong>and</strong></th>
<th>Concept 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual reality</td>
<td>Anatomy education</td>
<td>Medical students</td>
</tr>
<tr>
<td>or Simulation</td>
<td>or Anatomy teaching</td>
<td>or Medical education</td>
</tr>
</tbody>
</table>
What evidence is there that lifestyle interventions are effective in reducing the risk of obese persons developing type 2 diabetes?

<table>
<thead>
<tr>
<th>Concept 1 and</th>
<th>Concept 2 and</th>
<th>Concept 3 and</th>
<th>Concept 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifestyle interventions or Lifestyle changes or Lifestyle modifications</td>
<td>Obese or Obesity or Overweight</td>
<td>Type 2 diabetes or Type II diabetes or Non-insulin dependent diabetes</td>
<td></td>
</tr>
</tbody>
</table>
Question: What effect does caring for a stroke patient have on the quality of life of the carer?

<table>
<thead>
<tr>
<th>Concept 1</th>
<th>Concept 2</th>
<th>Concept 3</th>
<th>Concept 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td>Quality of life</td>
<td>Carer</td>
<td></td>
</tr>
</tbody>
</table>
Combining searches...

AND  Virtual reality
     AND
     Anatomy education

OR   Medical students
     OR
     Medical education
Remember: OR is more!
Phrases & Limits

Phrase searching

- heart disease will search for *heart + disease*
- “heart disease” will search for the phrase *heart disease*

Limits

- Publication date, age, publication types e.g:
  - Randomized controlled trials (RCTs)
  - Systematic Reviews
<table>
<thead>
<tr>
<th>Source</th>
<th>AND: Results include both terms</th>
<th>OR: Results include either term</th>
<th>NOT: Results do not include second term (use with caution)</th>
<th>PHRASE: Exact match of terms</th>
<th>WILDCARDS TRUNCATION: Searches for variant word-endings/spellings/increases results</th>
<th>PROXIMITY OPERATORS: Number of words between search terms-increases relevancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDLINE (OVID)</td>
<td>cells and signalling</td>
<td>cancer or neoplasm</td>
<td>HIV not AIDS</td>
<td>adverse drug reactions</td>
<td>cell* (0 - unlimited) cell*4 (limited) wom#n (1 character) signifying (1 or 0 characters)</td>
<td>penicillin adj3 allergy</td>
</tr>
<tr>
<td>PUBMED</td>
<td>cells and signalling</td>
<td>cancer or neoplasm</td>
<td>HIV not AIDS</td>
<td>“adverse drug reactions”</td>
<td>cell* (0 - unlimited)</td>
<td>N/A</td>
</tr>
<tr>
<td>SCOPUS</td>
<td>cells and signalling</td>
<td>cancer or neoplasm</td>
<td>HIV and not AIDS</td>
<td>“adverse drug reactions”</td>
<td>cell*, behavio*r (0 - unlimited) wom?n (1 character; ?? 2 characters, etc.)</td>
<td>penicillin w/5 allergy (any word order) penicillin pre/3 allergy (set word order)</td>
</tr>
<tr>
<td>DISCOVER (EBSCO)</td>
<td>cells and signalling</td>
<td>cancer or neoplasm</td>
<td>HIV not AIDS</td>
<td>“adverse drug reactions”</td>
<td>cell* (0 - unlimited) wom?n (1 character) signifying (1 or 0 characters)</td>
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</tr>
</tbody>
</table>
Scopus: create an account
University Library

Medicine: Home

Databases for Medicine

- ClinicalKey Medical Education
  ClinicalKey Medical Education provides digital access to over 200 cross-searchable medical textbooks, thousands of images and hundreds of videos. Users also have access to a range of study tools, including the ability to annotate, make notes and access the books offline. ClinicalKey, with its broader range of titles and enhanced study tool features, expands on and enhances the access to 16 medical e-textbooks previously available to University of Liverpool users via Elsevier eLibrary.
  more...

- MEDLINE
- PsycINFO
- PubMed
- Scopus
- UpToDate
- Visible Body

Your Liaison Librarian

Louise Minta

Contact:
My office is on the 1st floor of the Harold Cohen Library, at the end of Quiet Study Room 2.
0151 794 4366

Subjects:
Dentistry, Medicine

Email Me
Your details

First name: Louise
Family name: Minta

E-mail and password

E-mail address: l.minta@liverpool.ac.uk
Password: ********

* Password Guidelines

Add profile details

I wish to receive information from Elsevier B.V. and its affiliates concerning their products and services

* I have read and understood the Registered user agreement and agree to be bound by all of its terms.

Register
Look here for your name to check you are logged in
Example of a Scopus search

- "lifestyle intervention**" or "lifestyle change**"
- "type 2 diabetes" or "non insulin dependent diabetes"
- "randomized controlled trial"

Search tips:
- Put phrases in "quotation marks" and enter related/similar terms in the same search box and combine with "or"
- Enter each separate concept in a new search box. This will automatically combine with "and"
- Limit by study type, if appropriate
- Apply limits, if appropriate

Date range (inclusive):
- Published: 2010 to Present
Your first attempt may not work

• Don’t worry, this is normal!
• Too many results?
• Too few results?
• Too many irrelevant results?
Searching Medline

- Medline has a thesaurus – a controlled list of terms
- Whatever terms the author has used the indexer will try and ‘map’ the term to a term on this list
- These thesaurus terms are referred to as MeSH terms or ‘Medical Subject Headings’ or sometimes ‘subject headings’
- Using the thesaurus/scope notes can help you find other keywords for your search
MEDLINE: create an account
ClinicalKey Medical Education provides digital access to over 200 cross-searchable medical textbooks, thousands of images and hundreds of videos. Users also have access to a range of study tools, including the ability to annotate, make notes and access the books offline. ClinicalKey, with its broader range of titles and enhanced study tool features, expands on and enhances the access to 18 medical e-textbooks previously available to University of Liverpool users via Elsevier eLibrary.

- MEDLINE **Recommended**
- PsychInfo **Recommended**
- PubMed **Recommended**
- Scopus **Recommended**
- UpToDate **Recommended**
- Visible Body **Recommended** New
Don’t have an Account?

Use a Personal Account to save searches, create alerts and manage research.

Create Account
Create Personal Account

Personal Account Name: minta

Password: ************

Confirm Password: ************

Email Address: minta@liverpool.ac.uk

First Name: Louise

Last Name: Minta
Look here for your name to check that you are logged in.
Medical Subject Headings (MeSH)

• Efficacy of Docetaxel as a treatment for patients with lung cancer

• Docetaxel AND lung cancer
Medical Subject Headings (MeSH)

- Lung Neoplasms
  - Lung Tumour/Tumor
  - Lung Cancer
  - Lung Carcinoma
Scope note for: Lung Neoplasms

MeSH Heading: LUNG NEOPLASMS

Scope: Tumor or cancer of the LUNG

Note: Coded IM with histol type of neopl (IM)

References:
See Related:
- CARCINOMA, NON-SMALL-CELL LUNG
- CARCINOMA, SMALL CELL

Used For:
cancer, lung
cancer, pulmonary
cancer of lung
cancer of the lung
cancers, lung
cancers, pulmonary
lung cancer
lung cancers
lung neoplasm
lung neoplasms
neoplasm, lung
neoplasm, pulmonary
neoplasms, lung
neoplasms, pulmonary
pulmonary cancer
pulmonary cancers
pulmonary neoplasm
pulmonary neoplasms

Scope note provides a definition of the MeSH heading:

it suggests related terms;

and it lists the variant terms captured by the MeSH heading.
The results display in date order.
Diverse involvement of isoforms and gene aberrations of Akt in human lung carcinoma.

Abstract: Emerging evidence confirms a central role of Akt in cancer. To evaluate the relative contribution of deregulated Akt and their clinicopathological significance in lung carcinomas, overexpression, activation of Akt and Akt1 gene increases were investigated. Immunohistochemical staining for 108 cases revealed overexpression of total Akt, Akt1, Akt2 and Akt3 in 61.1, 47.2, 40.7 and 23.1%, respectively, and phosphorylated Akt in 42.6% of cases. Expression of total Akt, Akt2 and Akt3 were more frequently observed in small cell carcinoma, but phosphorylated Akt and Akt1 were more frequently observed in squamous cell carcinoma. RISH analysis revealed amplification of AKT1 in 4.2% and AKT3 increase by polysomy of chromosome 14 in 22.6% of cases. For AKT2, amplification was observed in 3.9% of cases. Although TEL-positive AKT1 and AKT2 gene increases (amplification/hybridization/polyomavirus) were found exclusively in the...
What happens if you can’t find a MeSH term?

• MeSH terms are there to help: if nothing quite matches your search term, use the ‘Search as Keyword’ option instead.

• Sometimes a MeSH term will be relevant, but you still want to search on your keyword: that’s fine; tick the MeSH term and also the ‘Search as Keyword’ option.

• MeSH terms may not be included for very recent topics, or specific drug names, for example
Your term mapped to the following Subject Headings:

Click on a subject heading to view more general and more specific terms within the tree.

<table>
<thead>
<tr>
<th>Select</th>
<th>Subject Heading</th>
<th>Explode</th>
<th>Focus</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clostridium difficile</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Anti-Bacterial Agents</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Clostridium Infections</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Ampicillin</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Vancomycin</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Enterobacteriaceae属</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Microbial Sensitivity Tests</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Metronidazole</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Pyridoxine</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Diarrhea</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*Select [fidaxomycin.mp search as Keyword]*
Tips for searching Medline

• Search for **one** term/phrase at a time. This will ensure your term will map to a MeSH heading (if there is one). Each term will be added to the ‘Search History’

• When all terms in your search strategy have been added to the Search History, select and combine with AND/OR

• Combine similar/related terms with ‘OR’ to get an overall set of results for a concept.

• Combine the separate concepts with ‘AND’
What effect does caring for a stroke patient have on the quality of life of the carer?
<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
<th>Type</th>
<th>Actions</th>
<th>Annotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stroke/</td>
<td>85640</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>&quot;Quality of Life&quot;/</td>
<td>166339</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Life Style/</td>
<td>53879</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2 or 3</td>
<td>217328</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Caregivers/</td>
<td>30554</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>carer*.mp.</td>
<td>10660</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>5 or 6</td>
<td>37139</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1 and 4 and 7</td>
<td>220</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>limit 8 to systematic reviews</td>
<td>18</td>
<td>Advanced</td>
<td>Display Results</td>
<td></td>
</tr>
</tbody>
</table>
Off-campus access

• Athens is not used to access library resources.
• Login to the University site – this authenticates you as a Liverpool student
• Access ejournals, ebooks and databases via the library web site
This is not the end......
weekly drop-in sessions in the Library
Thank you!

https://liverpool.onlinesurveys.ac.uk/library-sessions-feedback-1819

Louise Minta
Liaison Librarian
l.minta@liverpool.ac.uk
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