Locating Evidence

A sample database search for the clinical question:

What is the effectiveness of CPM therapy following knee replacement in achieving optimal range of motion?

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Bobst Library 9th Floor, room 907A
email: susan.jacobs@nyu.edu    phone: 212-998-2432
STEP 1:  Write out your clinical question:

*What is the effectiveness of CPM therapy following knee replacement in achieving optimal range of motion?*

For questions of therapy/intervention, use the **PICO** formula to identify the following **elements** in your question:

- **Patient/Problem:**
- **Intervention:**
- **Comparison:**
- **Outcome:**
What is the effectiveness of CPM therapy following knee replacement in achieving optimal range of motion?

- **Patient/Problem:**
  - knee replacement

- **Intervention:**
  - cpm therapy

- **Comparison:**
  - other therapy; no therapy?

- **Outcome:**
  - Optimal range of motion
What is the effectiveness of CPM therapy following knee replacement in achieving optimal range of motion?

- **Patient/Problem:**
  - knee replacement

- **Intervention:**
  - cpm therapy

- **Comparison:**
  - other therapy; no therapy?

- **Outcome:**
  - Optimal range of motion

**TIP:** Consider **Patient/Problem** and **Intervention** first when planning your search strategy and selecting database search terms.

[look for the **Comparison** and **Outcome** when you browse abstracts and review full text of articles]
STEP 2: Select a specialized database

From the libraries home page, http://www.library.nyu.edu/ select Articles via Databases, then choose a database from the A to Z list
For this question we will start with **Medline/PubMed**

<table>
<thead>
<tr>
<th>Database</th>
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<tbody>
<tr>
<td>PsycArticles</td>
</tr>
<tr>
<td>PsycBOOKS</td>
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<tr>
<td>PsycCritiques</td>
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<tr>
<td>PsycExtra</td>
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<tr>
<td>PsycINFO; 1887 to present</td>
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<tr>
<td>Connect via Ovid</td>
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<tr>
<td>PsycINFO; 1887 to present (CSA)</td>
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<tr>
<td>PsycLIT (now PsycInfo)</td>
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<tr>
<td>Connect via CSA</td>
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<tr>
<td>Public Administration NetBase</td>
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<tr>
<td>Public PAIR (Patent Application Information Retrieval)</td>
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<td>Publishers Directory (now part of Gale Directory Library)</td>
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<td><strong>PubMed</strong></td>
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</table>
Search Steps Schematically...

NATURAL LANGUAGE
Total knee replacement
AND
cpm therapy
AND

MeSH terms:
arthroplasty, replacement, knee
AND
motion therapy, continuous passive
Search Steps Schematically...

Arthroplasty, replacement, knee

Motion therapy, continuous passive

AND narrows the search

In PubMed: click on the Details, to view mapping
Search Steps Schematically...

In Medline/PubMed, use the **Limits** tab to apply categorical limits, such as age groups, publication types, dates…
A PubMed search query on knee replacement AND cpm therapy, is translated to the MeSH headings:

Arthroplasty, replacement, knee
AND
Motion therapy, continuous passive

(click on the Details tab to see how your query was translated. Or use the MeSH browser to locate terms and scope notes: http://www.ncbi.nlm.nih.gov/sites/entrez?db=mesh )
Once you have conducted your initial search, select the Limits tab to begin to reduce search results by level of evidence.


Scroll through Limits to select one or more Article Types, Age groups if appropriate, etc. Then select the "Go" button.
Effectiveness of prolonged use of continuous passive motion (CPM), as an adjunct to physiotherapy,

Lensen TA, van Steyn MJ, Crijns YH, Waltje EM, Reox GM, Geesink RJ, van den Brink MJ.

University Hospital Maastricht, Department of Physiotherapy, Maastricht, The Netherlands. Allen@maastrichtmumc.nl

BACKGROUND: Adequate and intensive rehabilitation is an important requirement for successful total knee arthroplasty (TKA). Continuous Passive Motion (CPM) should be implemented in the first rehabilitation phase after surgery, there is substantial evidence for its use in the in-hospital phase. A Cochrane review on this topic concluded that short-term use of CPM leads to greater knee range of motion (RoM), but research should concentrate on the treatment period during which CPM should be administered. Most studies were conducted on patients in hospital, but the efficacy of prolonged CPM use in the home situation as an adjunct to standardised physiotherapy (PT) is not yet described. Efficacy was assessed in terms of faster improvement in knee flexibility and overall physical recovery, measured at the end of the active treatment period, 17 days after surgery. Sixty patients with knee osteoarthritis undergoing total knee replacement were randomised over two treatment groups. The experimental group received CPM + PT for 17 consecutive days in the in-hospital phase (i.e., about four days), followed by PT alone (usual care) in the first two days to three months after surgery, both groups received standardised PT. The primary focus of rehabilitation was functional recovery of the knee.

RESULTS: Prolonged use of CPM slightly improved short-term RoM in patients with limited RoM at the time of discharge to a semi-standard PT programme. Assessment at 6 weeks and three months after surgery found no long-term effects of this intensive RoM training on benefits of the improved RoM at any of the outcome assessments. As RoM, routine use of prolonged CPM in patients with limited RoM at the time of discharge was not found to be beneficial. Routine use of prolonged CPM in patients with limited RoM at the time of discharge was not found to be beneficial.

TRIAL REGISTRATION: NCT00616364

Publication Types:
- Comparative Study
- Randomized Controlled Trial

MeSH Terms
- Aged
- Arthroplasty, Replacement, Knee/rehabilitation*
- Arthroplasty, Replacement, Knee/trauma
- Female
- Follow-Up Studies
- Humans
- Male
- Middle Aged
- Motion Therapy, Continuous Passive/methods*
- Motion Therapy, Continuous Passive/trends
Options may link to article full text or…
If an article is not available full text or hard copy in the libraries Bobcat catalog, click to order via Interlibrary Loan.
Locating the full text of articles...

• Look for a link from citation to “full text” or

• Search Bobcat to locate Bobst holdings
  
  http://www.bobcat.nyu.edu/
  
  – journals may be held in print on the 9th floor Current
    Periodical Shelves, bound in the stacks by call number,
    electronically, or on microform on A-level

  – journals may be linked electronically in Bobcat

• Interlibrary loan:
  
  http://library.nyu.edu/services/ill.html
Evidence is hierarchical. Explore the resources linked to the pyramid at: http://tinyurl.com/nyupyramid
Limits: raising the level of evidence

• In CINAHLPlus, click on Search Options tab to limit to Publication type: “research” OR “systematic review” or try the Clinical Queries.

• In Medline/PubMed, use the Limits tab to apply categorical limits, such as age groups, publication types, dates…

• Use Medline/PubMed “Clinical queries” or Medline/Ovid Additional Limits button to select from “clinical queries” Clinical queries include the ability to search for systematic reviews or limit to a clinical study category. More info at: http://www.nlm.nih.gov/bsd/pubmed_subsets/sysreviews_strategy.html

• In PsycINFO, click on Limit a Search, limit by Methodology; try using Clinical Queries.

• View a slide show on LIMITS: Magnet in a Haystack: filtering the literature for research studies. http://tinyurl.com/nyuhealthslides
Expanding a search

- use the **OR** operator
  - MESH terms or key words: arthroplasty, replacement, knee **OR** KA **OR**...TKA **OR**...

  **OR** expands the search by retrieving citations with *either* term

- Publication type: meta analysis **OR** review [Medline]
- Publication type: “research” **OR** “systematic review” [CINAHL]
Search Steps Schematically...

In CINAHL Plus, click on “refine search” tab to limit to Publication type:
“research” OR “systematic review”
• **In PsycINFO:** Limit to Empirical Study OR Experimental Replication OR Followup study OR Longitudinal study OR Meta analysis OR Prospective study OR Retrospective study OR Treatment Outcome Study

• **In Alt Healthwatch:** go to *Advanced* search, then limit to *scholarly (peer reviewed)* articles.
More tools for narrowing a search...

• Attach subheadings
  – arthroplasty, replacement, knee/rh [rehabilitation]
  – occupational therapy/trends [Trends]
  – phantom pain/Drugs [Drug Therapy]

• Apply limits
  – publication type (e.g., clinical trial, review)
  – year(s) of publication (yr=1998), language, age group
  – each database offers different limits
Getting more help:

• **Watch slide show:**
  Magnet in a Haystack: filtering the literature for research studies. [http://tinyurl.com/nyuhealthslides](http://tinyurl.com/nyuhealthslides)

• **Citing your sources in APA style:**
  [http://nyu.libguides.com/citations](http://nyu.libguides.com/citations)

• **Health Resources Page**
  [http://nyu.libguides.com/health](http://nyu.libguides.com/health)