



# Undertaking a literature search using PubMed

Farooq Qureshi, MBBS, MRCS, LRCP (UK), FRCS, is an academic general practitioner, Glenelg, South Australia, and Lecturer in Medical IT Systems, Department of General Practice, The University of Adelaide, South Australia.

## Case history

Ms SK aged 35 years, limps into my room distressed at the persistence of her lower back pain and sciatica. She injured her back 18 months ago while lifting boxes at work. She has been on dextropropoxyphene/paracetamol and naproxen 1000 mg tablets. Despite physiotherapy and medications, her symptoms have persisted and she is now feeling very despondent. I know that antidepressants that inhibit noradrenaline reuptake (tricyclics and tetracyclics) may be effective in reducing chronic low back but, given the side effect profile of these medications, I would like to know whether the newer SSRI agents offer benefits with less risk.

I decide to do a literature search using PubMed, which provides many online articles and texts on medical and health related issues, and is a search engine for medical literature. It contains structured abstracts that have been screened for their clinical relevance, although it lacks the 'vetting' of the Cochrane Library. PubMed is accessible through the National Library of Medicine, or via the RACGP website.



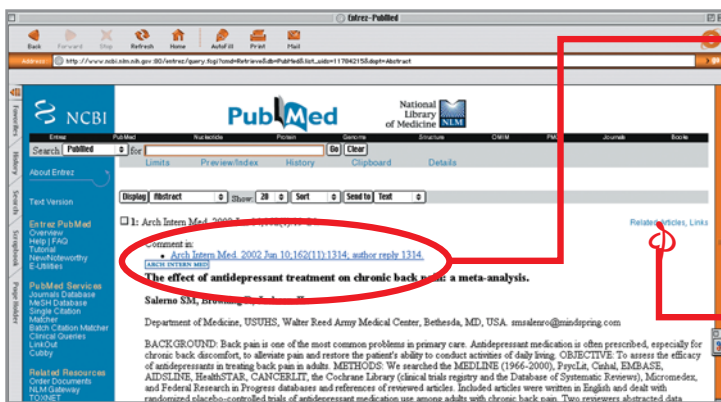
- I open my web browser and type <http://www.pubmed.gov>
  - NCBI (National Center for Biotechnology Information) web page opens
- In the **Search (PubMed) 'for'** window I type my query 'is antidepressant therapy effective in the treatment of chronic back pain'. A properly worded query produces finely tuned results and yields useful answers

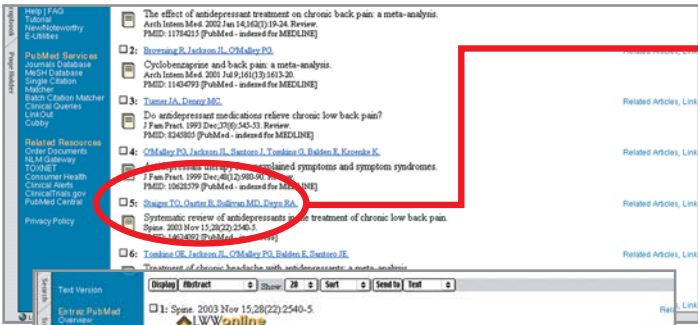
- I click on **Go**

- The results window shows 17 articles
- Article 4 by Salerno is of interest to me

- I click on:
  - 4: Salerno SM, Browning R, Jackson JL. The effect of antidepressant treatment on chronic back pain: a meta-analysis. Arch Intern Med. 2002 Jan 14;162(1):19-24. Review. PMID: 11784215 [PubMed – indexed for MEDLINE]

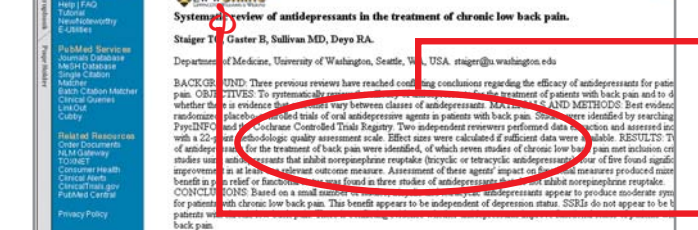
- After reading the abstract I want to have a quick look at other related articles of interest
- I click on **Related Articles** (in the upper right hand corner)
- The window displays 20 articles There are 2 articles of particular interest (3 and 5)



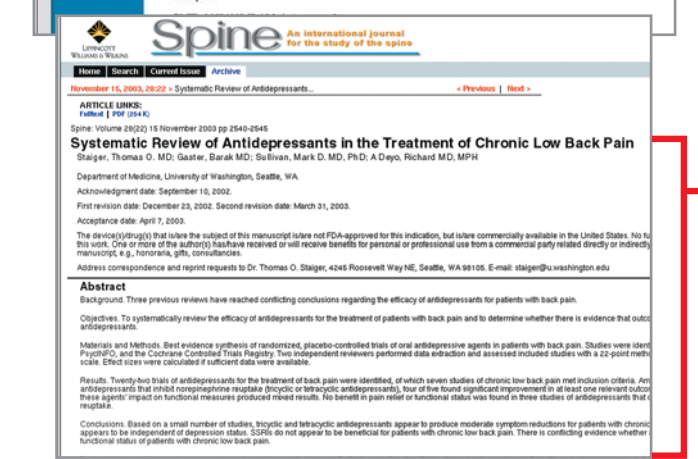


There are 2 articles of particular interest (3 and 5)

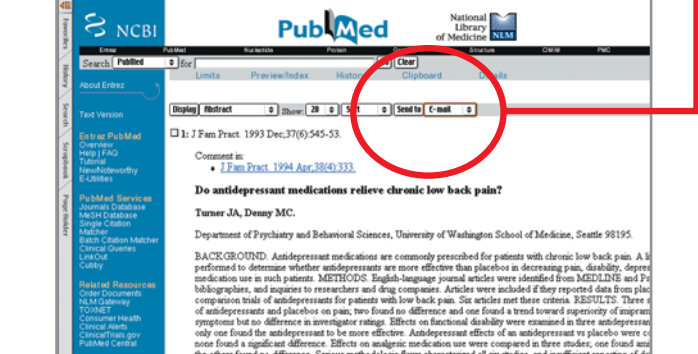
- I double click first on:
  - 5: Staiger TO, Gaster B, Sullivan MD, Deyo RA. Systematic review of antidepressants in the treatment of chronic low back pain. Spine. 2003 Nov 15;28(22):2540-5. PMID:14624092 [PubMed – in process]



- An abstract of the article appears in the next window
- As I am interested in reading the entire article I double click on **LWWonline**. This particular article appeared in the **Spine** journal. Many journals such as *Spine* are freely available on the web
- The article tells me that SSRIs do not appear to be beneficial for patients with chronic low back pain and that it may be worthwhile to try a tricyclic antidepressant for the pain although there is conflicting evidence



- To read the other review article of interest, I return to the PubMed website, click on 'back' to go to the previous page, then click on the heading:
  - 3: Turner JA, Denny MC. Do antidepressant medications relieve chronic low back pain? J Fam Pract. 1993 Dec;37(6):545-53. Review. PMID: 8245805 [PubMed – indexed for MEDLINE]



- PubMed also enables me to email a copy of this article to my colleagues so that we can discuss it at our next clinical meeting
- I can also add the PubMed address to 'favourites' in the browser so it is readily available for future use, or even customise a button within my medical records program

Framing my question in terms of the patient and her problem, the proposed intervention, the comparative treatment and the desired outcome allowed me to quickly track down articles that were directly relevant. Ms SK is now getting good effects from her tricyclic antidepressant with minimal side effects.  
Conflict of interest: none.